TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

AGENDA ITEM REQUEST

for Rulemaking Adoption

AGENDA REQUESTED: August 8, 2012

DATE OF REQUEST: July 20, 2012

INDIVIDUAL TO CONTACT REGARDING CHANGES TO THIS REQUEST, IF NEEDED: Charlotte Horn, (512) 239-o779

CAPTION: Docket No. 2011-1244-RUL. Consideration of the adoption of amended Section 298.290 and new Sections 298.300, 298.305, 298.310, 298.315, 298.320, 298.325, 298.330, 298.335, 298.340, 298.350, 298.355, 298.360, 298.365, 298.370, 298.375, 298.380, 298.385, and 298.390 of 30 TAC Chapter 298, Environmental Flow Standards for Surface Water.

The adoption would implement House Bill 3 and Senate Bill 3, 80th Legislature, 2007, Regular Session, relating to the establishment of environmental flow standards included in a permit or amended water right in the river and bay systems consisting of the Colorado and Lavaca Rivers and Matagorda and Lavaca Bays, and the Guadalupe, San Antonio, Mission, and Aransas Rivers and Mission, Copano, Aransas, and San Antonio Bays. Additionally, the rulemaking will amend the schedule for the revision of standards for the Sabine and Neches Rivers and Sabine Lake Bay. The proposed rules were published in the April 13, 2012 issue of the *Texas Register* (37 TexReg 2521). (Ron Ellis, Robin Smith) (Rule Project No. 2011-059-298-OW)

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Copy to CCC Secretary? NO YES X

Texas Commission on Environmental Quality
Interoffice Memorandum

To: Commissioners **Date:** July 20, 2012

Thru: Bridget C. Bohac, Chief Clerk
Zak Covar, Executive Director

From: L'Oreal W. Stepney, P.E., Deputy Director
Office of Water

Docket No.: 2011-1244-RUL

Subject: Commission Approval for Rulemaking Adoption
Chapter 298, Environmental Flow Standards for Surface Water
Environmental Flow Standards 2: Colorado/Lavaca and Guadalupe/San Antonio
Rule Project No. 2011-059-298-OW

Background and reason(s) for the rulemaking:
House Bill 3 and Senate Bill 3 (HB 3/SB 3), 80th Legislature, 2007, created the environmental flows process and established the Environmental Flows Advisory Group (Advisory Group) to oversee its implementation. HB 3/SB 3 also established the Environmental Flows Science Advisory Committee, local bay and basin area stakeholder committees (BBASC), and local bay and basin expert science teams (BBEST). A BBEST develops environmental flow analyses and recommends an environmental flow regime, based solely on the best available science, to their basin's BBASC. A BBASC, while considering the BBEST's recommendations and other factors, develops recommendations regarding environmental flow standards and strategies to meet the environmental flow standards and submits those recommendations to the Advisory Group and to the commission for rulemaking. The BBASCs also developed a work plan for adaptive management which includes a schedule for review and potential revision of the standards and strategies and submits the work plan to the Advisory Group for approval. HB 3 was authored by Representative Robert Puente and Representative Harvey Hilderbran. SB 3 was authored by Senator Kip Averitt.

Article 1, HB 3 and Article 1, SB 3 amended Texas Water Code (TWC), §§11.002, 11.023, 11.0235, 11.0841, 11.134, 11.147, 11.1471, 11.148, and 11.1491. HB 3/SB 3 added TWC, §§11.0236, 11.02361, 11.02362, 11.0237, and 15.4063. These HB 3/SB 3 amendments to the TWC codified the environmental flows process and its implementation. The amendment to TWC, §11.1471 specifically instructed the commission to adopt environmental flow standards by rule. The amendment to TWC, §11.1471 and §11.02362, provided for adaptive management and codified a process for revision to the standards if the BBASC's recommended a schedule other than every ten years.

This rulemaking implements TWC, §11.1471(a), through 30 Texas Administrative Code Chapter 298, by proposing appropriate environmental flow standards for the river and bay systems consisting of the Colorado and Lavaca Rivers and Matagorda and Lavaca Bays,

and the Guadalupe, San Antonio, Mission, and Aransas Rivers and Mission, Copano, Aransas, and San Antonio Bays. This rulemaking also implements TWC, §11.1471(f) and §11.02352(p) by amending §298.290 for the Sabine and Neches Rivers and Sabine Lake Bay to incorporate the schedule in the approved work plan for these basin and bay systems.

Scope of the rulemaking:
A.) Summary of what the rulemaking will do:
The scope of the adopted rulemaking is to implement the directive in TWC, §11.1471 for the two river basin and bay systems consisting of the Colorado and Lavaca Rivers and Matagorda and Lavaca Bays, and the Guadalupe, San Antonio, Mission, and Aransas Rivers and Mission, Copano, Aransas, and San Antonio Bays. The rulemaking will adopt appropriate environmental flow standards. Additionally, the rulemaking will amend the schedule for the revision of standards for the Sabine and Neches Rivers and Sabine Lake Bay.

B.) Scope required by federal regulations or state statutes:
TWC, §11.1471(a), states that the commission by rule shall adopt appropriate environmental flow standards for each river basin in the state; establish an amount of unappropriated water, if available, to be set aside to satisfy environmental flow standards. TWC, §11.1471(f), states that the adopted environmental flow standards may be altered by the commission in a rulemaking process undertaken in accordance with a schedule established by the commission that considers the approved work plan.

C.) Additional staff recommendations that are not required by federal rule or state statute:
None.

Statutory authority:
TWC, §§5.102, 5.103, 5.105, 11.0235, 11.02362, 11.147, and 11.1471.

Effect on the:
A.) Regulated community:
Members of the regulated community who apply for a new appropriation of state water will be affected by the environmental flow standard recommended by this adopted rulemaking. An application for a new appropriation of state water will be recommended for issuance only if there is water available after the environmental flow standard has been met. The result will be that there could be less state water available for appropriation. However, because the adopted standards are expected to function similarly to current streamflow restrictions for applications, the adopted standards are not expected to have significant fiscal implications for the regulated community.

The amendment to §298.290 for the Sabine and Neches Basins and Sabine Lake Bay should have no impact on members of the regulated community because the amendment only changes an existing schedule for review of standards.

B.) Public:
The adopted rules may affect applicants for new appropriations and amendments that increase the amount of water to be taken, stored, or diverted which could result in an applicant having to secure an additional source of water. However, because stream-flow restrictions are currently applied to new appropriations of water under existing practice and the adopted standards are expected to function similarly to current streamflow restrictions for applications, the adopted standards are not expected to have significant fiscal implications for the public.

The amendment to §298.290 for the Sabine and Neches Basins and Sabine Lake Bay should have no impact on members of the public because the amendment only changes an existing schedule for review of standards.

C.) Agency programs:
The adopted rulemaking would have little impact on agency programs. The Water Availability Division will implement the rules when processing applications for new appropriations in the affected river basins. Currently, program staff uses a desktop methodology to determine instream flow requirements. Assigning a flow requirement by rule will have little or no impact on processing times or workloads. The impact on the Office of Compliance and Enforcement will likewise be insignificant. Presently, enforceable instream flow requirements are placed in water use permits. After the adopted rulemaking is effective, those flow requirements will come from a different source (the adopted rule), but will not be enforced any differently by the Office of Compliance and Enforcement.

Changing the schedule for review and possible revisions of the rules will not affect agency programs because the review and possible revision of the rules would currently occur under the existing adopted rules.

Stakeholder meetings:
A stakeholder meeting was held on November 3, 2011, in Austin, Texas. TCEQ staff presented general information about the proposed rulemaking and asked the stakeholders for feedback on the issue of balancing human and other competing needs for water. The meeting was attended by 29 stakeholders representing a broad spectrum of interests in the basins affected by this rulemaking and across the state. The commission received over 2,700 comment letters from stakeholders and their feedback has been considered in development of the adopted rules.

On April 9, 2012, program staff met with stakeholders to discuss technical issues related to the proposed rule. Program staff provided detailed information and explanations of the modeling, science, and balancing used in drafting the proposed rule, including a discussion of the differences in the models that were used by the stakeholders and TCEQ.

Program staff also met with the Guadalupe, San Antonio, Mission, and Aransas Rivers and Mission, Copano, Aransas, and San Antonio Bay BBASC on April 12, 2012 and with the Colorado and Lavaca Rivers and Matagorda and Lavaca Bay BBASC on April 30, 2012 to provide the detailed information and explanations of the modeling, science, and balancing presented on April 9, 2012 and to respond to questions from these BBASC groups.

The commission held a rule public hearing on May 8, 2012 in Austin.

Public comment:
Staff received over 2,700 comments on the proposed rule package. In the Colorado and Lavaca Rivers and Matagorda and Lavaca Bay, the commission requested comments on the proposed rule and the stakeholders' recommendations. Some of the commenters requested specific changes to completely incorporate the stakeholders' recommendations. Many commenters requested increased standards for pulse flows.

In the Guadalupe, San Antonio, Mission, and Aransas Rivers and Mission, Copano, Aransas, and San Antonio Bay, the commission requested comments on the proposed rule and the stakeholders' recommendations. The majority of the commenters did not provide specific changes; however, most expressed support for adopting the stakeholders' recommendations and more stringent standards. Many commenters stated that staff's proposed rule was not sufficiently protective of San Antonio Bay, many expressed support for more stringent standards for the Guadalupe River and its tributaries, and some requested that the commission include protection for overbank flows in the adopted rule. In addition, many commenters requested that the commission adopt a rule requiring dedication of 10% of the yield of a new project to provide additional freshwater inflows to San Antonio Bay.

In the Sabine and Neches Rivers and Sabine Lake Bay, one commenter requested an alternate schedule for future revisions to the standards and requested that the entities requesting revisions not be limited to the BBASC for that basin and bay system.

Significant changes from proposal:
In response to comments, the commission made the following changes:

In the Colorado and Lavaca Rivers and Matagorda and Lavaca Bay, the adopted rule includes a minimum monthly inflow requirement for Matagorda Bay and a finding related to East Matagorda Bay that the sound ecological environment of East Matagorda Bay can be maintained by avoiding further reduction of freshwater inflows, to the extent those reductions can be avoided, and that strategies to provide additional freshwater inflows to East Matagorda Bay should be pursued.

In the Guadalupe, San Antonio, Mission, and Aransas Rivers and Mission, Copano, Aransas, and San Antonio Bay, the adopted rule refines the calculation and application of

the freshwater inflow standards for San Antonio Bay and reduces the allowable impairment of the standards by new permits and amendments subject to the rule.

Potential controversial concerns and legislative interest:
HB 3/SB 3 has legislative interest. The Advisory Group consists of nine members, appointed by the Governor, Lieutenant Governor, and Speaker of the House of Representatives. Six of those members are legislators, including the chairs of the Senate and House Natural Resource Committees.

Colorado and Lavaca Rivers and Matagorda and Lavaca Bays
The stakeholders submitted a consensus recommendation. TCEQ staff is unaware of any potential controversial concerns at this time.

Guadalupe, San Antonio, Mission, and Aransas Rivers and Mission, Copano, Aransas, and San Antonio Bays
A potential controversial concern related to the adopted rulemaking lies in the fact that the BBASC for this basin and bay system adopted their recommendations by a majority vote. Many stakeholders and commenters expressed concerns regarding freshwater inflow standards and implementation of those standards as well as concerns regarding the simplicity of the recommended environmental flow standards for the Guadalupe River and its associated tributaries.

Does this rulemaking affect any current policies or require development of new policies?
HB 3/SB 3 established a new policy for application of instream flow requirements in applications for new appropriations of state water. This rulemaking adopts that policy and replaces existing TCEQ practices for the affected river basins.

What are the consequences if this rulemaking does not go forward? Are there alternatives to rulemaking?
TWC, §11.1471, directs the commission to adopt a rule by September 1, 2012. This rulemaking complies with the statute and keeps the environmental flows process on schedule. Any alternative course of action would not be in compliance with the timetables established by HB 3/SB 3, as amended by the Advisory Group.

TWC, §11.1471(f), states that the adopted environmental flow standards may be altered by the commission in a rulemaking process undertaken in accordance with a schedule established by the commission that considers the approved work plan. The work plan for the Sabine and Neches Rivers and Sabine Lake Bay was approved by the Advisory Group on September 8, 2011 and recommends a different schedule than that in the currently adopted rule for this basin and bay system.

Key points in the adoption rulemaking schedule:
***Texas Register* proposal publication date:** April 13, 2012

Re: Docket No. 2011-1244-RUL

Anticipated *Texas Register* publication date: August 24, 2012
Anticipated effective date: August 30, 2012
Six-month *Texas Register* filing deadline: October 13, 2012

Agency contacts:
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Attachments
SB 3, 80th Legislative Session
HB3, 80th Legislative Session

cc: Chief Clerk, 2 copies
Executive Director's Office
Susana M. Hildebrand, P.E.
Anne Idsal
Curtis Seaton
Tucker Royall
Office of General Counsel
Ron Ellis
Charlotte Horn

The Texas Commission on Environmental Quality (TCEQ or commission) adopts the amendment to §298.290 and adopts new §§298.300, 298.305, 298.310, 298.315, 298.320, 298.325, 298.330, 298.335, 298.340, 298.350, 298.355, 298.360, 298.365, 298.370, 298.375, 298.380, 298.385, and 298.390.

Sections 298.290, 298.305, 298.310, 298.320, 298.325, 298.330, 298.335, 298.355, 298.360, 298.375, and 298.380 are adopted *with changes* to the proposed text as published in the April 13, 2012, issue of the *Texas Register* (37 TexReg 2521). Sections 298.300, 298.315, 298.340, 298.350, 298.365, 298.370, 298.385, and 298.390 are adopted *without changes* to the proposed text and will not be republished.

Background and Summary of the Factual Basis for the Adopted Rules

In 2007, the 80th Legislature passed House Bill 3 (HB 3), relating to the management of the water resources of the state, including the protection of instream flows and freshwater inflows; and Senate Bill 3 (SB 3), relating to the development, management, and preservation of the water resources of the state. Both of these bills amended Texas Water Code (TWC), §11.1471, which requires the commission to adopt rules related to environmental flow standards and set-asides. The commission is proposing to implement the environmental flow provisions of HB 3, Article 1, and SB 3, Article 1, and proposes environmental flow standards for the Colorado and Lavaca Rivers, their associated tributaries, and Matagorda and Lavaca Bays; and the Guadalupe, San

Antonio, Mission, and Aransas Rivers, their associated tributaries, and Mission, Copano, Aransas, and San Antonio Bays.

Prior to HB 3/SB 3, the commission had authority to protect environmental interests as it permitted state surface water. The commission had authority to maintain: existing instream uses under TWC, §11.147(d); water quality under TWC, §11.147(d) and §11.150; fish and wildlife habitat under TWC, §11.147(e) and §11.152; and freshwater inflows to bay and estuary systems under TWC, §11.147(a) - (c). TWC, §11.147(b) - (e) and §11.152 required that these environmental considerations be included only to the extent practicable or reasonable and required that environmental considerations be considered along with other factors of public welfare. HB 3/SB 3 did not make major changes to this commission authority.

The commission also retains its ability, granted prior to HB 3/SB 3, to place special conditions in water right permits to protect environmental interests. Before HB 3/SB 3, TWC, §11.134(b)(3)(D), required consideration of environmental interests for new appropriations of water, including amendments that granted an increase in the amount of water that could be diverted, and TWC, §11.085, required consideration of environmental interests for interbasin transfers. Permits for water projects that call for the re-diversion of wastewater or return flows to a watercourse, so called "indirect reuse" projects, were also subject to special conditions to protect environmental uses

under TWC, §11.042 and §11.046. Amendments that were not new appropriations were required to be authorized if, among other criteria, the amendment would not cause adverse impact to the environment of greater magnitude than under the original permit under TWC, §11.122(b). As a practical matter, if any adverse impact to the environment was noted in an application for an amendment, then special conditions were crafted to remove the adverse impact so that the amendment might be granted.

HB 3/SB 3 changed the process by which the state would decide the flow that needed to be preserved in the watercourse for the environment and the balancing of environmental interests along with other public interests. HB 3/SB 3 created a statewide Environmental Flows Advisory Group (Advisory Group). The Advisory Group was given the responsibility to appoint Basin and Bay Area Stakeholder Committees (the stakeholder committee) for each of the state's river basin, bay, and estuary systems. The stakeholder committees, in turn, appointed a Basin and Bay Expert Science Team (the science team). The science teams were to develop a recommended environmental flow regime, or schedule of flow quantities adequate to support a sound ecological environment. The stakeholders were to take the science team's recommendations and consider those recommendations in conjunction with other factors, including the present and future needs for water for other uses. The stakeholders were also to report their recommendations to the commission. Both the science teams and the stakeholder committees were to reach their recommendations on a consensus basis to the maximum

extent possible. The commission, in turn, is to take the recommendations from the science team, the stakeholder committees, the Advisory Group, and a statewide Science Advisory Committee (SAC), and consider that information along with other information and by rule adopt environmental flow standards for each basin and bay system. At the same time the commission is to establish an amount of unappropriated water, if available, to be set aside to satisfy the environmental flow standards to the maximum extent reasonable when considering human water needs. Once the environmental flow standards are adopted, the commission's objective or goal will be to protect the standards, along with the interests of senior water right holders, in its water rights permitting process for new appropriations and amendments that increase the amount of water to be taken, stored, or diverted. Under HB 3/SB 3, the commission may use the set-aside or use its existing authority to place special conditions in permits to protect the environmental flow standards.

The commission received the Colorado and Lavaca Rivers and Matagorda and Lavaca Bays science team report on March 1, 2011, and the stakeholder committee report on August 31, 2011. The commission received the Guadalupe, San Antonio, Mission, and Aransas Rivers and Mission, Copano, Aransas, and San Antonio Bays science team report on March 1, 2011, and the stakeholder committee report on September 1, 2011. Copies of the Colorado and Lavaca Rivers and Matagorda and Lavaca Bays reports are available on the following Web site:

http://www.tceq.texas.gov/permitting/water_rights/eflows/colorado-lavaca-bbsc.

Copies of the Guadalupe, San Antonio, Mission, and Aransas Rivers and Mission, Copano, Aransas, and San Antonio Bays reports are available on the following Web site: *http://www.tceq.texas.gov/permitting/water_rights/eflows/guadalupe-sanantonio-bbsc.*

The commission adopts Subchapter D to cover the Colorado and Lavaca Rivers and Matagorda and Lavaca Bays. The commission adopts Subchapter E to cover the Guadalupe, San Antonio, Mission, and Aransas Rivers and Mission, Copano, Aransas, and San Antonio Bays.

HB 3/SB 3 also added TWC, §11.02362(p), which recognized the importance of adaptive management and provided that after submitting its recommendations regarding environmental flow standards and strategies to meet the environmental flow standards to the commission, each stakeholder committee prepare and submit a work plan for approval by the Advisory Group. The work plan is to establish a periodic review of the basin and bay environmental flow analyses and environmental flow regime recommendations, environmental flow standards, and strategies, prescribe specific monitoring, studies, and activities; and establish a schedule for continuing the validation or refinement of the basin and bay environmental flow analyses and

environmental flow regime recommendations, the environmental flow standards adopted by the commission, and the strategies to achieve those standards.

The environmental flow standards for the Sabine and Neches Rivers and Sabine Lake Bay were adopted on April 20, 2011 and effective on May 15, 2011. On September 8, 2011, the Advisory Group approved a work plan and work plan addendum submitted by the Sabine and Neches Rivers and Sabine Lake Bay stakeholders. The work plan recommends a schedule for review of the environmental flow analyses and environmental flow regime recommendations, environmental flow standards, and strategies. Therefore, the commission adopts amendments to §298.290 for the Sabine and Neches Rivers and Sabine Lake Bay to change the schedule for revision of the standards.

Section by Section Discussion

Subchapter C: Sabine and Neches Rivers and Sabine Lake Bay

§298.290, Schedule for Revision of Standards

The commission adopts the amendment to §298.290 to provide for a changed schedule for re-examination of the environmental flow standards. On September 8, 2011, the Advisory Group approved a work plan and work plan addendum submitted by the Sabine and Neches Rivers and Sabine Lake Bay stakeholders. The work plan proposes a schedule for review of the environmental flow analyses and environmental flow regime

recommendations, environmental flow standards, and strategies. The stakeholders proposed that the environmental flow standards be reviewed on a five-year cycle integrated with the SB 1 (75th Legislature, 1997) Regional Water Planning five-year cycle. The work plan proposes that the SB 3 five-year periodic review schedule be aligned so that the review is available for consideration by the Regional Planning Groups to consider in each round of Regional Water Planning.

Based on the approved work plan, the commission adopts the amendment to the rule stating that the stakeholders submit their review of the environmental flow analyses and environmental flow regime recommendations, environmental flow standards, and strategies, for the Sabine and Neches Rivers and Sabine Lake Bay, by September 15, 2013, and every five years thereafter, and that rule revisions, if any, be adopted by the commission within one year of the submittal of the stakeholder's review. In response to comment, the commission added the phrases "arising from a rulemaking undertaken in conjunction with any such periodic review" and "after the deadline for the review" and deleted the phrase "of the stakeholder's submittal of their review" to adopted §298.290 for clarification.

Subchapter D: Colorado and Lavaca Rivers and Matagorda and Lavaca Bays

The commission adopts new Subchapter D to contain all of the environmental flow standards and rules specific to the basin and bay system composed of the Colorado and

Lavaca Rivers, their associated tributaries, and Matagorda and Lavaca Bays. The science team delivered its report to the commission on March 1, 2011. The stakeholder committee delivered its recommendations to the commission on August 31, 2011. The commission now adopts environmental flow standards as required under TWC, §11.02362(d). This adopted new subchapter would implement the schedule established by the Advisory Group under TWC, §11.02362, and environmental flow standards required of the commission in TWC, §11.1471.

§298.300, Applicability and Purpose

The commission adopts new §298.300 to describe the purpose of Subchapter D and under what circumstances it applies.

§298.305, Definitions

The commission adopts new §298.305. The adopted section has definitions of terms that will apply only to this subchapter. The commission acknowledges that overbank flows and flushing flows for the bays and estuaries are considered to be components of a flow regime for a sound ecological environment. However, these flows result from naturally occurring large rainfall events, which will likely continue to occur. Therefore, the commission is not including overbank flows or flushing flows as a component of the adopted standards. In §298.305(1), (7), (9), (13), and (17) the commission adopts definitions for "Annual average inflow," "Fall season quantity," "Intervening season

quantity," "Monthly threshold inflow," and "Spring season quantity" because the adopted freshwater inflow standards for Matagorda Bay vary by season and year. In response to comment, the commission added the phrase "during any individual calendar year," to adopted §298.305(17) to clarify how this quantity is calculated. In response to comment, the commission also deleted the word "strategy" and the phrase "which is used for the sole purpose of providing additional freshwater inflows to Matagorda Bay through voluntary strategies" from §298.305(13) because the monthly threshold inflow applies in consideration of new applications to store, take, or divert water. In §298.305(2) and (11) the commission adopts definitions for "Annual strategy frequency," and "Long-term annual strategy quantity." These frequencies and quantities are used for the sole purpose of providing additional freshwater inflows to Matagorda and Lavaca Bays through voluntary strategies. In §298.305(3), (4), (14), and (20) the commission adopts definitions for "Average condition," "Dry condition," "Severe condition," and "Wet condition." A range of flow conditions - average, dry, severe, and wet - is adopted to be defined as the stakeholders recommended. In response to comment, the commission added the phrases "and represents periods when conditions are dry but not severe" and "and that is intended to represent periods when conditions are drier than average conditions but not severe" to adopted §298.304(4) to clarify the definition of "Dry condition." In response to comment, the commission added the phrase "and that is intended to represent the driest periods" to adopted §298.305(14) to clarify the definition of "Severe condition." In response to comment, the commission

also added the phrase "and that is intended to represent the wettest conditions" to adopted §298.305(20) to clarify the definition of "Wet condition." In §298.305(5), (15), (19), and (21) the commission adopts definitions for the seasons "Fall," "Spring," "Summer," and "Winter" because the adopted environmental flow standards for this basin and bay system vary by season. The definitions are the same as the definitions of the seasons in the recommendations of the science team, which were subsequently used by the stakeholders to develop their recommendations. In §298.305(6), (8), and (16) the commission adopts definitions for "Fall inflow quantity," "Intervening inflow quantity," and "Spring inflow quantity" because the adopted freshwater inflow standards for Lavaca Bay vary by season and year. In response to comment, the commission added the phrase "during any individual calendar year," to adopted §298.305(6) and (16) to clarify how these quantities are calculated. In §298.305(10) the commission adopts a definition for "Inflow regime level" because the adopted freshwater inflow standards for Matagorda and Lavaca Bays include multiple levels of freshwater inflows. In response to comment, the commission added the word and phrases "one of," "that includes a spring season quantity, a fall season quantity, and an intervening season quantity as described in the figure located in §298.330(a)(2)," "inflow," "inflow," "inflow," and "as described in the figure located in §298.330(c)," and deleted the word "season" to clarify application of this term. In §298.305(12) the commission adopts a definition for "Modeled annual frequency" because the frequencies at which specific levels of freshwater inflows occur in the commission's water availability models (WAMs) differ

from the frequencies based on gaged flows used for the purpose of providing additional freshwater inflows to Matagorda and Lavaca Bays through voluntary strategies. Finally, in §298.305(18) the commission adopts a definition for "Sound ecological environment" for this basin and bay system. This adopted definition is based on the definition recommended by the science team.

§298.310, Findings

The commission adopts new §298.310 regarding findings related to sound ecological environments. The adopted finding regarding the ecological environment is consistent with the science team and stakeholder reports. Information on the commission's reasoning for the adopted schedule of flow quantities and environmental flow standards can be found in this preamble under the analyses for §§298.320, 298.325, and 298.330. In response to comment, the commission added the word and phrase "variable" and "and that incorporate inflow and frequency targets at which specific levels of freshwater inflows occur, which are used for the sole purpose of providing additional freshwater inflows to Matagorda and Lavaca Bays through voluntary strategies" and deleted the phrase "that vary by season" from adopted §298.310(c) to acknowledge that freshwater inflows vary by season and year and the importance of targets to increase freshwater inflows through voluntary strategies. In response to comment, the commission added new §298.310(d), stating, "For East Matagorda Bay, the commission does not adopt environmental flow standards but finds that the sound ecological environment of East

Matagorda Bay can be maintained by avoiding further reduction of freshwater inflows, to the extent those reductions can be avoided, and that strategies to provide additional freshwater inflows to East Matagorda Bay should be pursued" in order to recognize the importance of East Matagorda Bay in the adopted rule. This adopted new section would implement TWC, §11.1471.

§298.315, Set-Asides and Standards Priority Date

The commission adopts new §298.315 which establishes the priority date for any set-asides and any modeling of the environmental flow standards in the commission's WAMs as the date the commission received the report from the science team for the basin and bay system, which was March 1, 2011. The commission protects high flow pulse standards from being permitted to smaller applicants for new appropriations because under adopted §298.335(b), (c), and (e), some of the high flow pulse standards would not be included in some water right permits for new appropriations. In addition, the commission needs to ensure that new appropriations, or amendments to add a new appropriation, will not affect downstream flow standards at measurement points that may not be applicable to those new appropriations or amendments. The commission also adds these changes to ensure consistency with adopted §298.20.

§298.320, Calculation of Hydrologic Conditions

The commission adopts new §298.320 to explain the determination of hydrologic

conditions for implementation and application of the standards to water right permits to which the proposed standards apply. The hydrologic conditions are based on the recommendations of the stakeholders, and are calculated from actual gaged flows or reservoir storage. In response to comment, the commission added new §298.320(g) stating, "The hydrologic condition indicators set out in subsections (b) - (d) of this section govern the operations of permits subject to this subchapter during the initial period, of not longer than ten years, until the environmental flows standards in this subchapter are re-evaluated. Those indicators were calculated to achieve compliance with the percentages of time stated in subsections (e) and (f) of this section. The hydrologic condition indicators set out in subsections (b) - (d) of this section will be recalculated, no less frequently than once every ten years, in order to achieve, to the greatest extent possible, compliance with the percentages of time stated in subsections (e) and (f) of this section." The commission adds this new subsection to provide for ongoing, periodic revisions of the hydrologic condition indicators. Implementation of hydrologic conditions in the commission's WAMs, used in the availability determination for water rights permitting for the river basins subject to this subchapter may result in different cumulative streamflows, reservoir storage, or reservoir elevation than those described in this section. The commission's adopted rules, for purposes of water availability determinations, provide that hydrologic conditions used in the commission's WAMs will be calculated using the applicable frequencies for hydrologic conditions recommended by the stakeholders and the WAM simulated flows or reservoir storage.

§298.325, Schedule of Flow Quantities

The commission adopts new §298.325 regarding the schedule of flow quantities. The commission adopts this section to explain the implementation of the environmental flow standards in the following section. The commission may not use the exact wording of this section as the wording in water right permits issued after the adoption of these rules. However, this section describes how the commission will implement the proposed environmental flow standards in water right permits or amendments for new appropriations.

Subsistence flows are the minimum flows below which the commission will not allow diversions or storage of water. Therefore, the water right holder may not divert or store water if the flow at the applicable measurement point is below the subsistence flow standard. During severe hydrologic conditions, if the flow is above the subsistence flow standard but below the dry base flow standard, the water right holder may divert or store water down to the subsistence flow standard. The commission's adopted rules provide that the subsistence flow standard can be variable depending on the season, and that only the subsistence flow for a particular season limits diversions by a water right subject to the standards, in that season.

During dry, average, or wet hydrologic conditions, a water right holder may not divert

water when the flow is below the base flow standard for that season. Once the flow at the applicable measurement point is above the base flow standard for the season, the water right holder may store or divert water according to its permit as long as the flow at the measurement point does not fall below the applicable base flow standard for that season and in accordance with the applicable hydrologic condition as set out in §298.320. In response to comment, the commission added the sentence, "For all measurement points, the dry base flow standard applies during severe hydrologic conditions" to adopted §298.325(c) to clarify which base flow standard applies during severe hydrologic conditions.

The commission's adopted rules provide that pulse flows be allowed to pass if streamflows are above the base or subsistence flow standard for the season and if the pulse flow trigger level is reached at the measurement point. The commission's adopted rules provide that, for measurement points on the Colorado River below Lake Travis, once the pulse flow trigger conditions are met, the water right owner may not store or divert water unless the daily average flow is at or above the pulse flow trigger level and the applicable pulse duration has occurred. For all other measurement points, once the pulse flow trigger conditions are met, the water right holder may not store or divert water until either the applicable pulse volume passes the applicable measurement point or the applicable pulse duration has occurred.

The adopted rule does not require that a water right holder be required to produce a high flow pulse because pulses occur when there are high rainfall events. The commission's adopted rule does provide that during these high rainfall events, the applicable high flow pulse be allowed to pass downstream. A water right holder on the Colorado River below Lake Travis can divert water in excess of the applicable pulse requirement as long as those diversions do not prevent the occurrence of the pulse flow trigger level of the applicable pulse and as long as the duration requirement is met for the applicable pulse. The commission's adopted rule provides that a water right holder on the Colorado River above Lake Travis, on tributaries of the Colorado River, in the Lavaca River Basin, or in the Colorado-Lavaca and Lavaca-Guadalupe Coastal Basins can divert water in excess of the applicable pulse flow trigger requirement as long as those diversions do not prevent the occurrence of the pulse flow trigger level of the applicable pulse and as long as the duration or volume requirement is met for the applicable pulse.

If, in a particular season, only one or none of the small seasonal high flow pulses identified in the commission's adopted rule is generated, there would be no need to "catch up" or allow more than the applicable number of high flow pulses to pass in the following season. There would also be no need to "catch up" or allow more than the applicable number of large seasonal or annual high flow pulses to pass. For the Colorado River below Lake Travis, there would also be no need to allow more than the

applicable number of larger high flow pulses to pass. The commission agrees with the stakeholders that pulse flows not be tied to a hydrologic condition. In addition, the commission's adopted rule provides that if the pulse requirements for a large high flow pulse event are satisfied and therefore this high flow pulse is allowed to pass, the requirements for smaller high flow pulse events during that season would be considered to be satisfied at the applicable measurement point.

The commission's adopted rule provides that if a water right owner stored water at a previous time and complied with the applicable environmental flow requirements at that time, the water right owner would not need to comply with any environmental flow requirements in effect when subsequent use of that stored water occurs.

§298.330, Environmental Flow Standards

The commission adopts new §298.330 to provide the environmental flow standards of TWC, §11.1471, for the basin and bay system composed of the Colorado and Lavaca Rivers, associated tributaries, and Matagorda and Lavaca Bays. The commission based its decision on consideration of the recommendations from the stakeholders, sound science, and other public interests and relevant factors.

The stakeholders expressed strong concerns about the reduction of freshwater inflows to East Matagorda Bay. The stakeholders adopted the following statement: "Strategies to

maintain and increase freshwater inflows should be pursued to support a sound ecological environment within East Matagorda Bay." The stakeholders' intent was to avoid a further reduction of freshwater inflows, to the extent those reductions can be avoided, and that strategies should be pursued to provide additional freshwater inflows to East Matagorda Bay.

The adopted bay and estuary standards for Matagorda and Lavaca Bays generally track the recommendations of the stakeholders. The stakeholders recognized the role of environmental flow standards both in water rights permitting and in establishing targets for purposes of providing additional freshwater inflows through voluntary strategies. Based on this the stakeholders proposed a dual set of recommendations for freshwater inflows. The stakeholders proposed that, for purposes of water availability determinations, specific values based on the WAM in effect at the time they developed their recommendations be included in the adopted rule. The stakeholders recognized that the WAMs can change as new permits and amendments are added and for other reasons and, therefore, the commission does not propose to include specific frequencies for use in water availability determinations in the adopted rule. Instead, the commission's adopted rule provides that new permits or amendments to increase the amount of water stored, taken, or diverted shall not decrease the long-term annual strategy quantity, as adjusted consistent with the stakeholders' recommendation, the modeled annual frequency, or the monthly threshold inflow below the baseline values in

the WAM in effect at the time the first application for a water right permit or amendment subject to this subchapter is considered. In response to comment, the commission added new §298.330(a)(1)(3) stating, "decrease the monthly inflow quantity to Matagorda Bay below 15,000 acre-feet per month" to include a decrease of monthly threshold inflow as a criterion for determining impairment of the standards, and made conforming changes to the figures in §298.330(a)(2) and (b). The commission also added the word "help" to adopted §298.330(b) and (d) to clarify its intent to protect incremental additional freshwater inflows resulting from voluntary permitted strategies. The commission also added the words "describe" and "frequency" and deleted the words "listed" and "level" to adopted §298.330(d) to clarify this provision. In addition, the commission's adopted rule provides that new permits or amendments to increase the amount of water stored, taken, or diverted shall not decrease the monthly inflow quantity to Matagorda Bay below 15,000 acre-feet per month. The commission further adopts rules providing that if strategies are implemented through a water right permit to provide additional freshwater inflows to Matagorda or Lavaca Bays, any subsequent new permits or amendments for new appropriations of water not be allowed to reduce the long-term annual quantity or the long-term annual frequency below the modeled levels that would occur with the permitted strategy in place. The stakeholders recommended that a flushing flow event be allowed to pass for Lavaca Bay. A flow event of the magnitude proposed by the stakeholders is the result of high rainfall events, which should continue to occur. In

addition, events of this magnitude can result in out-of-bank flood events. Therefore, the commission did not include the flushing flow event in the adopted standards.

The measurement points and the adopted base flow and subsistence flow standards are those recommended by the stakeholders. The adopted high flow pulse standards are generally based on recommendations of the stakeholders. Although the stakeholders did not recommend overbank flows, the stakeholders recommended pulse trigger levels based on flood stage levels. These pulse trigger levels were intended to represent bankfull events. However, in many locations, flows at the flood stage could inundate low-lying areas and could therefore represent an event larger than the bankfull event. The commission reduced the trigger levels for some high flow pulses to the action stage level to ensure that application of the standards would not cause flooding. The action stage level is defined by the National Weather Service as the stage which, when reached by a rising stream, represents the level where the National Weather Service or a partner/user needs to take some type of mitigation action in preparation for possible significant hydrologic activity. In addition, at some locations, the stakeholders recommended pulse flows with return periods in excess of one year. With the exception of the lower Colorado River below Lake Travis, there was little site-specific information supporting these specific higher pulse flow levels and frequencies. The executive director (ED) also reviewed the impacts of greater than annual events on the remaining unappropriated water in these basins as discussed further. Based on these factors, and

with the exception of measurement points on the lower Colorado River below Lake Travis, the commission did not include pulses with return periods longer than one year in the adopted rule. For measurement points on the Colorado River below Lake Travis, the commission adopts pulse flows with a return period longer than one year because those specific pulse flow levels were based on a site-specific study.

The stakeholders performed an analysis of the impacts of the adopted standards on future water supply needs, reviewed unappropriated water at various locations throughout the basin and bay system, and considered the results of these analyses in their recommendations. The ED reviewed the information provided by the stakeholders. The ED also performed his own analysis to address the issue of balancing human and other competing needs for water in the basin and bay system by examining the impact of the proposed standards on unappropriated flow in the river basins affected by the adopted rule. The ED's analysis is not intended as a finding that water is available for specific projects. When applications for projects are evaluated, water availability is based on specific facts in those applications.

The ED analyzed the impacts of the adopted standards on the remaining unappropriated water at representative measurement points in the Colorado and Lavaca River Basins and associated coastal basins. The ED based his analysis on results from the WAMs used for his water availability determinations for new permits or amendments that

request a new appropriation of water. The ED calculated both the amount of unappropriated water at selected measurement points and the impact of the adopted standards on unappropriated water. The remaining unappropriated water in these basins, before application of the adopted standards, varied from less than 1% of the time to approximately 18% of the time at measurement points in the Colorado River basin and from 40% of the time to 60% of the time in the Lavaca River Basin and associated coastal basin streams. Unappropriated water in these basins generally occurs during times of higher flow; therefore, increasing pulse volumes and frequencies during wetter periods reduces the remaining unappropriated flow. The ED evaluated the freshwater inflow standards recommended by the stakeholders and found that application of the standards resulted in some water available for appropriation during higher flow events. Copies of the WAMs used in this analysis are available at: *http://www.tceq.texas.gov/goto/eflows/rulemaking*.

The ED performed water quality analyses to evaluate relationships between streamflow and the water quality parameters identified by the science team and to look for trends and criteria excursions. These analyses did not identify any areas of concern that need to be addressed through this rulemaking process. The ED also considered whether reduction of the adopted standards would result in a significant increase in unappropriated water in these basins and found that it did not. Based on the results of the analysis of unappropriated flow and the water quality analysis, the ED determined

that there would be no significant impact from implementation of the adopted standards.

The adopted rule does not set aside any unappropriated water to protect the proposed environmental flow standards. Any unappropriated water that is available in these river basins is available only during relatively wet conditions. The commission determines that the environmental flow standards may be adequately protected by special conditions in water right permits or amendments for new appropriations of water in these basins. Special conditions are a more effective method to maximize the use of water by allowing water to be used for dual purposes. Special conditions to protect environmental flows may allow water permitted to downstream senior water rights, as well as return flows and permitted but unused water, to satisfy the special conditions. This adopted new section would implement TWC, §11.1471.

§298.335, Water Right Permit Conditions

The commission adopts new §298.335 relating to water right permit conditions. The adopted provision would require the commission to place special conditions in water right permits for new appropriations and amendments that would add additional appropriations to existing permits. The special conditions would be to protect the environmental flow standards established by the subchapter. Consistent with the recommendations of the stakeholders, the commission's adopted rule provides that,

with the exception of measurement points on the Colorado River below Lake Travis where the water right permit applicant proposes to store more than 2,500 acre-feet of water or divert water at a rate of more than 500 cubic feet per second (cfs), water right permits to divert or store water would contain special conditions adequate to protect the environmental flow standards. Water right permit applications on the Colorado River below Lake Travis, where the water right permit applicant proposes to store less than 2,500 acre-feet of water or to divert at a rate less than 500 cfs would not contain special conditions relative to high flow pulses. In response to comment the commission added the phrase, "all pulse flow requirements up to the one per year pulse flow requirement except as specified in subsections (c) and (d) of this section" and deleted the phrase, "the environmental flow standards of this subchapter" from adopted §298.335(b). The commission added new §298.335(c) stating, "For water right permits with an authorization to divert at a rate greater than 800 cfs or to store more than 2,500 acre-feet in an on-channel reservoir, on the Colorado River below Lake Travis, and to which the environmental flow standards apply, that are issued after the effective date of this subchapter, the water right permit or amendment shall contain flow restriction special conditions that are adequate to prevent impairment of the one per 18-month pulse flow requirement. Impairment of the one per 18-month pulse flow requirement would occur if the permit, in combination with other permits subject to this subchapter, that are issued after the effective date of this subchapter, would reduce the frequency of occurrence or the average volume of the one per 18-month pulse by more than 10%

based on the period of record of the water availability model in effect at the time the first permit subject to this subchapter is considered." The commission also added new §298.335(d) stating, "For water right permits with an authorization to divert at a rate greater than 2,700 cfs or to store more than 2,500 acre-feet in an on-channel reservoir, on the Colorado River below Lake Travis, and to which the environmental flow standards apply, that are issued after the effective date of this subchapter, the water right permit or amendment shall contain flow restriction special conditions that are adequate to protect the one per two-year pulse flow requirement" and relettered the remaining subsection as adopted subsection (e). The commission added these provisions to clarify how water right permit flow restriction special conditions apply to pulse flows larger than the one year event on the Colorado River below Lake Travis. This adopted new section would implement TWC, §11.134(b)(3)(D) and §11.1471.

§298.340, Schedule for Revision of Standards

The commission adopts new §298.340 to provide the schedule for re-examination of the environmental flow standards. The commission proposes to take up a possible rulemaking to change the standards ten years from the effective date of the rules, unless the stakeholder committee submits a work plan approved by the Advisory Group that calls for a more frequent review. The commission notes that it is prohibited from providing that the rulemaking process occurs more frequently than once every ten years unless the stakeholders' work plan approved by the Advisory Group under TWC,

§11.02362(p), calls for a more frequent schedule. The commission notes that, as of the time of adoption of these rules, it has not received an approved work plan from the stakeholder committee. Should the commission receive an approved work plan after final adoption of this rule package, the commission is free to consider an amendment to this section and change the schedule more often than once every ten years. The adopted new section would implement TWC, §11.1471(f).

Subchapter E: Guadalupe, San Antonio, Mission, and Aransas Rivers, and Mission, Copano, Aransas, and San Antonio Bays

The commission adopts new Subchapter E to contain all of the environmental flow standards and rules specific to the basin and bay system composed of the Guadalupe, San Antonio, Mission, and Aransas Rivers, their associated tributaries, and Mission, Copano, Aransas, and San Antonio Bays. The science team delivered its report to the commission on March 1, 2011. The stakeholder committee delivered its recommendations to the commission on September 1, 2011. The commission must now adopt environmental flow standards under TWC, §11.02362(d). This adopted new subchapter would implement the schedule established by the Advisory Group under TWC, §11.02362, and environmental flow standards required of the commission in TWC, §11.1471.

§298.350, Applicability and Purpose

The commission adopts new §298.350 to describe the purpose of Subchapter E and under what circumstances it applies.

§298.355, Definitions

The commission adopts new §298.355. The adopted section has definitions of terms that will apply only to this subchapter. The commission acknowledges that overbank flows are considered to be components of a flow regime for a sound ecological environment. However, these flows result from naturally occurring large rainfall events, which will likely continue to occur. Therefore, the commission is not including overbank flows as a component of the adopted standards. In §298.355(1), (2), and (11) the commission adopts definitions for "Average condition," "Dry condition," and "Wet condition." A range of flow conditions - average, dry, and wet - is adopted to be defined as the stakeholders recommended. In response to comment, the phrase "and that is intended to represent periods that are neither dry nor wet" was added to the definition of "Average condition" in adopted §298.355(1); the phrase, "and that is intended to represent the driest periods" was added to the definition of "Dry condition" in adopted §298.355(2); and, the phrase, "and that is intended to represent the wettest periods" was added to the definition of "Wet condition" in adopted and renumbered §298.355(11). These phrases were added to clarify when these conditions would apply. In §298.355(3), (6), (9), and (12) the commission adopts definitions for the seasons, "Fall," "Spring," "Summer," and "Winter" because the adopted environmental flow standards for this

basin and bay system vary by season. The definitions are the same as the definitions of the seasons in the recommendations of the science team, which were subsequently used by the stakeholders to develop their recommendations. In response to comment, the phrase, "for the measurement points listed in §298.330(c)" was added to the definition of "Spring" in adopted §298.355(6) and the definition of "Summer" in adopted §298.355(9) to clarify that these definitions apply to instream standards adopted in §298.330(c). In §298.355(4) the commission adopts a definition for "Inflow regime level" because the adopted freshwater inflow standards for San Antonio Bay and the Mission-Aransas Estuary include multiple levels of freshwater inflows that occur with specific frequencies. In §298.355(5) the commission adopts a definition for "Modeled permitting frequency" for use in water rights permitting for applications which increase the amount of water authorized to be stored, taken, or diverted as described in §298.10. In §298.355(7) the commission adopts a definition for "Sound ecological environment" for this basin and bay system. This adopted definition is based on the definition recommended by the science team. Finally, in §298.355(8) the commission adopts a definition for "Strategy target frequency" to be used solely for the purpose of pursuing voluntary strategies to provide additional freshwater inflow to the bays and estuaries covered in this subchapter. In response to comment, the commission adopts new §298.355(10) to provide a definition of "Time period" to define occurrence frequencies for specific pulses at four measurement points as specified in the figures located in §298.330(c)(12)(B), (13)(B), (14)(B), and (15)(B) because those pulses are defined by

time-period and this term is needed to help describe how pulse flow compliance for those pulses will be determined. As a result of this addition, the commission has renumbered paragraphs (10) - (11) in §298.355.

§298.360, Findings

The commission adopts new §298.360 regarding findings related to sound ecological environments. The adopted finding regarding the ecological environment is consistent with the science team and stakeholder reports. Information on the commission's reasoning for the adopted schedule of flow quantities and environmental flow standards can be found in this preamble under the analyses for §§298.370, 298.375, and 298.380. In response to comment, the commission added the word "variable" and the phrase "and that incorporate inflow and frequency targets at which specific levels of freshwater inflows occur, which are used for the sole purpose of providing additional freshwater inflows to Mission, Copano, Aransas, and San Antonio Bays through voluntary strategies" to adopted §298.360(c) to acknowledge the importance of targets for implementation of strategies to provide additional freshwater inflows. This adopted new section would implement TWC, §11.1471.

§298.365, Set-Asides and Standards Priority Date

The commission adopts new §298.365 which establishes the priority date for any set-asides and any modeling of the environmental flow standards in the commission's

WAMs as the date the commission received the report from the science team for the basin and bay system, which was March 1, 2011. The commission intends to protect high flow pulse standards by not permitting these flows to smaller applicants for new appropriations because under proposed §298.385(b), the high flow pulse standards would not be included in some water right permits for new appropriations. In addition, the commission needs to ensure that new appropriations, or amendments to add a new appropriation, will not affect downstream flow standards at measurement points that may not be applicable to those new appropriations or amendments. The commission also adds these changes to ensure consistency with adopted §298.20.

§298.370, Calculation of Hydrologic Conditions

The commission adopts new §298.370 to explain the determination of hydrologic conditions for implementation and application of the standards to water right permits to which the adopted standards apply. The method for determining hydrologic conditions, for water right permits to which hydrologic conditions are applicable, for use as special conditions in those water right permits, is based on the recommendations of the stakeholders. Implementation of hydrologic conditions in the commission's WAMs, used in the availability determination for water rights permitting, for the river and coastal basins for which hydrologic conditions are applicable may result in different cumulative streamflows than those derived for the purposes of developing special conditions for a water right permit to which those hydrologic conditions are applicable.

The commission's adopted rule provides that, for purposes of water availability determinations, hydrologic conditions used in the commission's WAMs will be calculated based on the period of record for the applicable WAM and using the applicable frequencies for hydrologic conditions recommended by the stakeholders and applied to the WAM simulated flows.

§298.375, Schedule of Flow Quantities

The commission adopts new §298.375 regarding the schedule of flow quantities. The commission adopts this section to explain the implementation of the environmental flow standards in the following section. The commission does not necessarily intend to use the exact wording of this section as the wording in water right permits issued after the adoption of these rules. However, this section describes how the commission intends to implement the adopted environmental flow standards in water right permits or amendments applications for new appropriations.

Subsistence flows are the minimum flows below which the commission will not allow diversions or storage of water. Therefore, the water right holder may not divert or store water if the flow at the applicable measurement point is below the subsistence flow standard. For measurement points in the Guadalupe River Basin, the commission adopts that if the flow at the applicable measurement point is above the subsistence flow standard but below the applicable base flow standard, the water right holder must allow

the applicable subsistence flow, plus 50% of the difference between measured streamflow and the applicable subsistence flow, to pass its measurement point, and any remaining flow may be diverted or stored. For measurement points in the San Antonio River Basin and the San Antonio-Nueces Coastal Basin, during dry hydrologic conditions, if the flow at the applicable measurement point is above the subsistence flow standard but below the applicable dry base flow standard, the water right holder must allow the applicable subsistence flow, plus 50% of the difference between measured streamflow and the applicable subsistence flow, to pass its measurement points, and any remaining flow may be diverted or stored. The commission's adopted rule provides that the subsistence flow standard can be variable depending on the season, and that only the subsistence flow for a particular season limits diversions by a water right subject to the standards, in that season.

For measurement points in the Guadalupe River Basin, once the flow at the applicable measurement point is above the base flow standard for the season, the water right holder may store or divert water according to its permit as long as the flow at the measurement point does not fall below the applicable base flow standard for that season. For measurement points in the San Antonio River Basin and the San Antonio-Nueces Coastal Basin, during average or wet hydrologic conditions, a water right holder may not store or divert water when the flow at the applicable measurement point is below the base flow standard for that season. Once the flow at the applicable

measurement point is above the base flow standard for the season, the water right holder may store or divert water according to its permit as long as the flow at the applicable measurement point does not fall below the applicable base flow standard for that season and in accordance with the applicable hydrologic condition as set out in §298.370.

The commission's adopted rule provides that pulse flows be allowed to pass if streamflows are above the base or subsistence flow standard for the season, subject to the pulse flow exemption as described in §298.385(b) and if the pulse flow trigger level is reached at the measurement point. The adopted rule also provides that, for measurement points described in §298.380(c)(12) - (15), for large pulses, once the pulse flow trigger conditions are met, the water right owner may not store or divert water until the daily average flow is at or above the pulse flow trigger level and the applicable pulse duration has occurred. For all other measurement points and for small seasonal pulses at measurement points described in §298.380(c)(12) - (15), once the pulse flow trigger conditions are met, the water right holder may not store or divert water until either the applicable pulse volume passes the applicable measurement point or the applicable pulse duration has occurred.

The adopted rule does not require that the water right holder be required to produce a pulse flow because pulses occur when there are high rainfall events. The commission

does adopt that during these high rainfall events, the applicable high flow pulse be allowed to pass downstream. The commission's adopted rule provides that a water right holder on the San Antonio River or Cibolo Creek can divert water in excess of the applicable large pulse flow trigger requirement as long as those diversions do not prevent the occurrence of the pulse flow trigger level of the applicable large pulse and so long as the duration requirement is met for the applicable large pulse. The commission's adopted rule provides that a water right holder on the San Antonio River or Cibolo Creek can divert water in excess of the applicable small pulse flow trigger requirement as long as those diversions do not prevent the occurrence of the small pulse flow trigger level and as long as the duration or volume requirement is met for the applicable small pulse. The commission also adopts that all other water right holders can divert water in excess of the applicable pulse requirement so long as those diversions do not prevent the occurrence of the pulse flow trigger level of the applicable pulse and as long as the duration or volume requirement is met for the applicable pulse.

If, in a particular season, only one of the small seasonal high flow pulses identified in the commission's adopted rule is generated, there would be no need to "catch up" or allow more than the applicable number of high flow pulses to pass in the following season. There would also be no need to "catch up" or allow more than the applicable number of large seasonal high flow pulses to pass. In response to comment, for large seasonal pulses at measure points described in §298.380(c)(12) - (15), the commission adopts a

provision that each time-period is independent of other time-periods with response to high flow pulse frequency and adds the phrase "and each time-period is independent of each other time-period with respect to high flow pulse frequency" to adopted §298.375(d)(4). The commission agrees with the stakeholders that pulse flows not be tied to a hydrologic condition. In response to comment, the commission added the words "subsistence or" and the word "applicable" to adopted §298.375(d)(1) to clarify that pulse flows are not tied to hydrologic conditions and to clarify the references to pulse flow duration. In addition, the adopted rule provides that if the pulse requirements for a large seasonal high flow pulse event are satisfied and therefore this high flow pulse is allowed to pass, the requirements for smaller seasonal high flow pulse events during that season would be considered to be satisfied at the applicable measurement point.

The commission's adopted rule provides that if a water right owner stored water at a previous time and complied with the applicable environmental flow requirements at that time, the water right owner would not need to comply with any environmental flow requirements in effect when subsequent use of that stored water occurs.

§298.380, Environmental Flow Standards

The commission adopts new §298.380 to provide the environmental flow standards of TWC, §11.1471, for the basin and bay system composed of the Guadalupe, San Antonio,

Mission, and Aransas Rivers, their associated tributaries, and Mission, Copano, Aransas, and San Antonio Bays. The commission based its decision on consideration of the recommendations of stakeholders, sound science, and other public interests and relevant factors.

The adopted bay and estuary standards for San Antonio Bay and the Mission-Aransas Estuary generally track the recommendations of the stakeholders. The commission agrees with the stakeholders that, for months where there is no freshwater inflow standard in the adopted rule, application of the proposed instream flow standards to water right applications subject to this subchapter should provide sufficient flow to the bays and estuaries. The stakeholders recognized the role of environmental flow standards in both water rights permitting and in establishing targets for purposes of providing additional freshwater inflows through voluntary strategies. Based on this, the stakeholders recommended a dual set of recommendations for freshwater inflows. The stakeholders proposed that, for purposes of water availability determinations, specific frequency values based on the WAM in effect at the time they developed their recommendations be included in the proposed rule. However, the stakeholders recognize that the WAMs change as new permits and amendments are added and for other reasons. Therefore, the commission does not adopt specific frequencies for use in availability determinations in the proposed rule. The adopted rule provides that new permits or amendments to increase the amount of water stored, taken, or diverted shall

not impair the frequency at which specific inflow regime levels occur by more than the values set out in §298.380(a)(3)(A) - (C) and (4)(A) - (C) as compared to the baseline values in the commission's WAMs in effect at the time the first application for a water right permit or amendment subject to this subchapter is considered. In response to comment, the commission removed the phrase "10%" and added the phrase, "the values set out in paragraphs (3)(A) - (C) and (4)(A) - (C) of this subsection". In response to comments, the commission added new §298.380(a)(1) and (2) to clarify how the allowable impairment will be calculated and applied in water availability determinations for new water rights or amendments subject to this subchapter and renumbered the remaining provisions. In response to comment, the commission added new §298.380(a)(3)(A) - (C) and (4)(A) - (C) to reduce the 10% allowable impairment, where possible, to 5% or 8% depending on the specific inflow regime and to clarify how the allowable impairment will be calculated for each specific inflow regime.

The stakeholders also proposed that, for new appropriations greater than 200 acre-feet per year, each applicant should dedicate the lesser of 10% of the project yield or 10% of the authorized annual diversion to the environment to provide additional freshwater inflows to the bays and estuaries. The stakeholders further recommended that the commission, through rulemaking, form a stakeholder advisory group to advise the commission on the 10% dedication. HB 3/SB 3 contemplates that environmental flow standards will be protective of the environment. The commission is unable to require a

10% dedication of water to the environment by applicants for new appropriations. TWC, §11.0235(d) states, "The legislature has not expressly authorized granting water rights exclusively for: (1) instream flows dedicated to environmental needs or inflows to the state's bay and estuary systems; or (2) other similar beneficial use." Further, requiring this dedication would encourage applicants for new appropriations to request more water than they need. The commission's adopted standards are protective of the environment; therefore, the commission did not include a requirement for a 10% dedication, in the adopted standards and the adopted rule does not establish a stakeholder advisory group in this rulemaking. The commission's adopted rule further provides that if strategies are implemented through a water right permit to provide additional freshwater inflows to San Antonio Bay or the Mission-Aransas Estuary, any subsequent new permits or amendments for new appropriations of water not be allowed to reduce the frequency at which inflow regime levels occur below the levels that would occur in the commission's WAM with the permitted strategy or strategies in place. In response to comment, the commission added the word "help" to adopted §298.380(b) to clarify its intent to protect incremental additional freshwater inflows resulting from voluntary permitted strategies.

The measurement points and the adopted base flow and subsistence flow standards for the San Antonio River Basin and the San Antonio-Nueces Coastal Basin are those recommended by the stakeholders; however, some flow values were rounded. In

response to comment, the commission corrected a typographical error in the figure located in §298.380(c)(15)(A) to change the Fall dry base flow value from 367 cfs to 167 cfs. The adopted high flow pulse standards are generally based on recommendations of the stakeholders. At some locations, the stakeholders recommended pulse flows with durations in excess of one month. With the exception of the San Antonio River and Cibolo Creek, there was little site-specific information supporting specific high flow pulses, including pulses with long durations. Therefore, the commission did not include pulse flows with durations longer than 30 days in the adopted rule. The measurement points and the subsistence flow standards for the Guadalupe River Basin are those recommended by the stakeholders. The base flow standards and pulse flow values were adjusted based on the balancing analysis discussed further.

The stakeholders performed an analysis of the impacts of the proposed standards on future water supply needs and considered the results of these analyses in their recommendations. The ED reviewed the information provided by the stakeholders. The ED also performed his own analysis to address the issue of balancing human and other competing needs for water in the basin and bay system. The ED's analysis is not intended as a finding that water is available for specific projects. When applications for projects are evaluated, water availability is based on specific facts in those applications.

The ED's selected scenario for the balancing analysis is based on a hypothetical

diversion of a large amount of water from the Guadalupe River Basin. This amount of water, 135,000 acre-feet, is greater than the amount considered by the stakeholders but less than the amount identified in the Regional Water Plan as necessary for future human water needs. For this evaluation, the ED used the commission's WAM for the Guadalupe river basin and modified it by adding the selected scenario. The ED performed analyses to estimate water availability under four conditions: 1) no environmental flow requirements; 2) application of the commission's current default methodology; 3) application of the stakeholders' recommendation; and, 4) application of the adopted environmental flow standard. This analysis is intended to address the impacts of different environmental flow conditions on diversions of water from the river and therefore does not include a storage component. Applying either no instream flow requirement or the default methodology produces annual availabilities of 59% and 30%, respectively. Application of the stakeholders' recommendation and of the adopted standards produces annual availabilities of less than 5% and 25%, respectively. Annual availability is the percentage of time that the annual diversion requirement is met from river diversions. In response to comments, the ED also performed the four analyses at a more downstream location, United States Geological Survey (USGS) gage 08173900, Guadalupe River at Gonzales. Applying either no instream flow requirement or the default methodology produces annual availabilities of 75% and 63%, respectively. Application of the stakeholders' recommendation and of the adopted standards produced annual availabilities of 50% and 63%, respectively. The ED applied the

adopted standards for San Antonio Bay and found that application of the standards, as adopted in the rule, did not impact water availability for the scenario. Copies of the WAMs used in this analysis are available at:

http://www.tceq.texas.gov/goto/eflows/rulemaking.

The ED performed water quality analyses to evaluate relationships between streamflow and the water quality parameters identified by the science team and to look for trends and criteria excursions. These analyses did not identify any areas of concern that need to be addressed through this rulemaking process. The ED also considered whether reduction of the adopted standards would result in a significant increase in the amount of water available for the scenario and found that it did not. Based on the results of these analyses, the ED determined that there would be no significant impact from implementation of the adopted standards.

The adopted rule does not set aside any unappropriated water to protect the adopted environmental flow standards. Any unappropriated water that is available in these river basins is available only during relatively wet conditions. The environmental flow standards may be adequately protected by special conditions in water right permits or amendments for new appropriations of water in these basins. Special conditions are a more effective method to maximize the use of water by allowing water to be used for dual purposes. Special conditions to protect environmental flows may allow water

permitted to downstream senior water rights, as well as return flows and permitted but unused water, to satisfy the special conditions. This adopted new section would implement TWC, §11.1471.

§298.385, Water Right Permit Conditions

The commission adopts new §298.385 relating to water right permit conditions. The adopted provision would require the commission to place special conditions in water right permits for new appropriations and amendments that would add additional appropriations to existing permits. The special conditions would be to protect the environmental flow standards established by the subchapter. Consistent with the recommendations of the stakeholders, the adopted rule provides that, for water right permit applications where the diversion rate is less than 20% of a pulse flow trigger requirement, the water right permit or amendment would not include special conditions relative to that high flow pulse. This adopted new section would implement TWC, §11.134(b)(3)(D) and §11.1471.

§298.390, Schedule for Revision of Standards

The commission adopts new §298.390 to provide the schedule for re-examination of the environmental flow standards. The adopted rule requires that the commission take up a possible rulemaking to change the standards ten years from the effective date of the rules, unless the stakeholder committee submits a work plan approved by the Advisory

Group that calls for a more frequent review. The commission notes that it is prohibited from providing that the rulemaking process occurs more frequently than once every ten years unless the stakeholders' work plan approved by the Advisory Group under TWC, §11.02362(p), calls for a more frequent schedule. The commission notes that, as of the time of adoption of these rules, it has not received an approved work plan from the stakeholder committee. Should the commission receive an approved work plan after final adoption of this rule package, the commission is free to consider an amendment to this section and change the schedule more often than once every ten years. The adopted new section would implement TWC, §11.1471(f).

Final Regulatory Impact Determination

The commission evaluated these adopted rules and performed an analysis of whether these adopted rules require a regulatory impact analysis under Texas Government Code, §2001.0225. These rules are not a "major environmental rule" under Texas Government Code, §2001.0225 because although the specific intent of the rulemaking is to protect the environment, these rules do not potentially adversely affect in a material way the economy, or a sector of the economy. Also, the purpose of these rules is not to exceed a standard set by federal law, exceed an express requirement of state law, exceed a requirement of a delegation agreement or contract between the state and an agency of the federal government to implement a state and federal program, or to adopt rules solely under the general powers of the agency instead of specific state law. This

rulemaking is specifically required by TWC, §11.1471. The purpose of these rules is to establish environmental flow standards and set-asides for the Colorado and Lavaca Rivers, their associated tributaries, and Matagorda and Lavaca Bays; and the Guadalupe, San Antonio, Mission and Aransas Rivers, their associated tributaries, and Mission, Copano, Aransas, and San Antonio Bays as required by TWC, §11.1471(a). These rules also implement TWC, §11.02362(p) and §11.1471(f), to revise the schedule for review of the existing standards for the Sabine and Neches Rivers and Sabine Lake Bay. Therefore, no regulatory impact analysis is required under Texas Government Code, §2001.0225 for this rulemaking.

The commission invited public comment regarding the draft regulatory impact analysis determination during the public comment period. No comments were received.

Takings Impact Assessment

The commission evaluated these adopted rules and performed analysis of whether these adopted rules constitute a takings under Texas Government Code, Chapter 2007. The specific purpose of these rules is to establish environmental flow standards and set-asides for the Colorado and Lavaca Rivers, their associated tributaries, and Matagorda and Lavaca Bays; and the Guadalupe, San Antonio, Mission, and Aransas Rivers, their associated tributaries, and Mission, Copano, Aransas, and San Antonio Bays, as expressly required by TWC, §11.1471(a). These rules also implement TWC, §11.02362(p)

and §11.1471(f), to revise the schedule for review of the existing standards for the Sabine and Neches Rivers and Sabine Lake Bay. Promulgation and enforcement of these adopted rules would be neither a statutory nor a constitutional taking of private real property. Specifically, because under TWC, §11.147(e-1), these rules cannot be retroactively applied to water rights issued after September 1, 2007, the subject adopted regulations do not affect a landowner's rights in private real property. Thus, this rulemaking does not burden (constitutionally); nor restrict or limit the owner's right to existing property and reduce its value by 25% or more beyond that which would otherwise exist in the absence of the regulations.

Consistency with the Coastal Management Program

The commission reviewed the adopted rulemaking and found that the proposal is subject to the Texas Coastal Management Program (CMP) in accordance with the Coastal Coordination Act, Texas Natural Resources Code, §§33.201 *et. seq*., and, therefore, must be consistent with all applicable CMP goals and policies. The commission conducted a consistency determination for the adopted rules in accordance with Coastal Coordination Act Implementation Rules, 31 TAC §505.22, and found the adopted rulemaking is consistent with the applicable CMP goals and policies.

CMP goals applicable to the proposed rules include: 1) to protect, preserve, restore, and enhance the diversity, quality, quantity, functions, and values of coastal natural resource

areas; and, 2) to ensure sound management of all coastal resources by allowing for compatible economic development and multiple human uses of the coastal zone. CMP policies applicable to the proposed rules include those contained in 31 TAC §501.33. The adopted rules implement HB 3/SB 3, which established the environmental flows process to provide certainty in water management and development and to provide adequate protection of the state's streams, rivers, bays, and estuaries. Since one of the purposes of the adopted rules is to protect coastal natural resources, the rules are consistent with CMP goals and policies.

Promulgation and enforcement of these rules will not violate or exceed any standards identified in the applicable CMP goals and policies, because the adopted rules are consistent with these CMP goals and policies, because these rules do not create or have a direct or significant adverse effect on any coastal natural resource areas, and because one of the purposes of the adopted rules is to protect coastal natural resources.

The commission invited public comment regarding the consistency with the CMP during the public comment period. No comments were received.

Public Comment

The commission held a public hearing on May 8, 2012. The comment period closed on May 14, 2012. The commission received comments from the: Aransas County

Commissioners Court (ACCC); Aransas County Navigation District (ACND); Audubon Texas; Bexar Audubon Society; Calhoun County Commissioners Court (CCCC); Citizens Alliance for Responsible Development (CARD); Coastal Conservation Association Texas (CCA); Cow Creek Groundwater Conservation District (Cow Creek GCD); Environmental Stewardship (ES); Greater Edwards Aquifer Alliance (GEAA); Guadalupe San Antonio Basin and Bay Stakeholder Committee (GSA BBASC); Guadalupe-Blanco River Authority (GBRA); Guadalupe River Trout Unlimited (GRTU); Hill Country Alliance (HCA); International Crane Foundation (ICF); Lower Colorado River Authority (LCRA); TCEQ's Office of Public Interest Counsel (OPIC); San Antonio River Authority (SARA); San Marcos River Foundation (SMRF); National Wildlife Federation and the Lone Star Chapter of the Sierra Club (NWF and Sierra Club-Lone Star); Texas Parks and Wildlife Department (TPWD); United States Fish and Wildlife Service (USFWS); Upper Guadalupe River Authority (UGRA); City of Victoria (Victoria) and 2,757 individuals.

Generally, GBRA, UGRA, Victoria, CCCC, and five individuals support the rule. Generally, ES, OPIC, NWF and Sierra Club-Lone Star and LCRA supported portions of the rule. Generally, ACCC; ACND; Audubon; Bexar Audubon; CARD; CCA; Cow Creek GCD; GEAA; GSA BBASC; GRTU; HCA; ICF; SARA; SMRF; TPWD; USFWS and 2,752 were against the rule. NWF and Sierra Club-Lone Star were opposed to Subchapter E. NWF and Sierra Club-Lone Star, and LCRA suggested specific changes to the rule as

noted in the Response to Comments section of this preamble.

Response to Comments

Public Benefit and Costs

GBRA commented that the findings of the public benefit and costs analysis conducted in conjunction with these proposed rules found, in part, the following: "Because the proposed standards are expected to function similarly to current streamflow restrictions for applications, the proposed standards are not expected to have significant fiscal implications for units of state or local government including river authorities, cities, or water districts." This finding is likely inaccurate if the impacts upon water planning are considered. The SB 1 water planning process works with a 50-year horizon. Because the water planning process must consider all relevant rules and regulations, it is very likely that numerous long-term projects, such as importing water across basin divides or developing new reservoirs - strategies that are paramount to meeting anticipated demands - will be significantly impacted. This could result in large water deficits with significant economic impacts. GBRA therefore urges the commission to recognize the full measure of unintended consequences of environmental flow standards on the legislatively mandated water planning process.

The commission responds that applications for new appropriations of water currently receive flow restrictions based on their location and facts

provided in the application. Similarly, an application for a new appropriation of water under these rules will receive streamflow restrictions as provided by the adopted rules. The primary difference between streamflow restrictions assigned under the existing desktop methodology and streamflow restrictions assigned under the adopted rule is how the flows for the environment are distributed throughout the year. Because streamflow restrictions currently applied to new appropriations of water under existing practice and streamflow restrictions under the proposed standards are expected to function similarly, the proposed standards are not expected to have significant fiscal implications. Additionally, under HB 3/SB 3's adaptive management provisions, the stakeholders will have future opportunities to re-evaluate the issue of balancing human and other competing needs for water in the bay and basin systems. The commission also notes that the fiscal note in the rule proposal preamble is limited by statute to a five-year outlook.

General

One thousand, four-hundred and twenty-eight individuals asked TCEQ to adopt environmental flow standards consistent with those in the environmental flow recommendations reports put forward by the Colorado and Lavaca Rivers/Matagorda and Lavaca Bays area Stakeholder Committee and the Guadalupe, San Antonio, Mission

and Aransas Rivers/Mission, Copano, Aransas, and San Antonio Bays area Stakeholder Committee. These individuals commented that the recommendations developed by the two stakeholder groups represent a carefully crafted compromise that balances the need for sustaining a healthy environment and providing sufficient supply of water for human needs. These individuals also commented that failure to recognize and adopt these recommendations only invites continued conflicts over Texas water resources.

The commission responds that it considered the science team recommendations, the SAC's review of those recommendations, and the stakeholder recommendations. However, the commission respectfully disagrees that it had to adopt the stakeholder recommendations in their entirety because SB 3 clearly provides that the commission perform its own review of the stakeholders' recommendations. As provided in TWC, §11.02362(o), the stakeholders develop recommendations, not final environmental flow standards, and send their recommendations to the commission. Under TWC, §11.1471, the commission is to adopt appropriate environmental flow standards "that are adequate to support a sound ecological environment, to the maximum extent reasonable considering other public interests and other relevant factors." The commission is required to perform its own review based on several factors, including human needs. However, the commission has adopted many of the

stakeholders' recommendations in both basin and bay systems. The rule was not changed in response to this comment.

One thousand, four-hundred and twenty-four individuals commented that Texas must develop creative solutions for protecting our natural heritage while simultaneously allowing water development to occur. These individuals further commented that the Texas Legislature created the environmental flows process to bring Texans together to develop these creative solutions.

The commission responds that it followed the process created by the Texas Legislature in TWC, §11.1471, to determine these flow standards. It considered all of the recommendations provided by the science team and the stakeholder groups and other relevant factors, when drafting the adopted rules. No change has been made in response to this comment.

One thousand, four-hundred and twenty-seven individuals commented that disregarding the stakeholders' carefully crafted recommendations not only fails to capitalize on creative solutions, it undermines the entire environmental flows process and disregards the legislative intent of the environmental flows process - to move Texas forward.

The commission did not disregard the science team recommendations, the SAC's review of those recommendations, or the stakeholder recommendations, but considered all of them. However, the commission respectfully disagrees that it had to adopt the stakeholder recommendations in their entirety because SB 3 clearly provides that the commission perform its own review of the stakeholders' recommendations. As provided in TWC, §11.02362(o), the stakeholders develop recommendations, not final environmental flow standards, and send their recommendations to the commission. Under TWC, §11.1471, the commission is to adopt appropriate environmental flow standards "that are adequate to support a sound ecological environment, to the maximum extent reasonable considering other public interests and other relevant factors." The commission is required to perform its own review based on several factors, including human needs. However, the commission has adopted many of the stakeholders' recommendations in both basin and bay systems. The rule was not changed in response to this comment.

One thousand, two-hundred and ninety-three individuals commented that the proposed rule on environmental water flows for the Colorado and Lavaca Rivers/Matagorda Bay area and the Guadalupe and San Antonio Rivers/San Antonio Bay area must not be adopted as currently written. The rule falls unreasonably short of providing the

environmental protections that these rivers and bays need to remain healthy and productive. Adoption of this proposal would worsen existing challenges these waterways face by allowing additional water withdrawals at times when the rivers and bays, and wildlife that depend on them, most need sufficient flows.

The commission followed its instructions in TWC, §11.1471, to determine these flow standards. It considered all of the recommendations provided by the science team and the stakeholder groups and other relevant factors, including commission staff's water availability analyses, when drafting the adopted rules. The commission believes that the adopted rules are sufficiently protective of the environment because they include a flow regime with subsistence, base, and pulse flows and also include freshwater inflow standards. The numerical values for these flow regime components are based on the values in the stakeholder reports. Under SB 3's adaptive management provisions, further analyses and studies will be performed in the future to determine whether the adopted standards, once implemented, continue to protect the environment. No change has been made in response to this comment.

One thousand, two hundred and ninety-two individuals commented that TCEQ must adopt a rule that is no less protective than the stakeholder committees'

recommendations. The recommendations already include many environmental compromises that were agreed upon to balance human water supply needs with those of the environment. TCEQ's rationale for weakening the protections is insufficient. These commenters urged TCEQ to adopt the full suite of stakeholder recommended protections and nothing less.

The commission did not disregard the science team recommendations, the SAC's review of those recommendations, or the stakeholder recommendations, but considered all of them. However, the commission respectfully disagrees that it had to adopt the stakeholder recommendations in their entirety because SB 3 clearly provides that the commission perform its own review of the stakeholders' recommendations. As provided in TWC, §11.02362(o), the stakeholders develop recommendations, not final environmental flow standards, and send their recommendations to the commission. Under TWC, §11.1471, the commission is to adopt appropriate environmental flow standards "that are adequate to support a sound ecological environment, to the maximum extent reasonable considering other public interests and other relevant factors." The commission has adopted many of the stakeholders' recommendations in both basin and bay systems. The rule was not changed in response to this comment.

Two individuals requested that the TCEQ ban all coal fired and nuclear powered electric power plants because they pollute air and water in wetlands and bays and lakes but also because they waste water. The commenters stated that TCEQ should stop future nuclear power plant construction which costs taxpayers huge sums in loan guarantees and subsidies. The commenters suggested that TCEQ should instead adopt a Texas natural gas, wind, solar, and geothermal energy policy for Texas that would make Texas a world leader in those clean energy industries not to mention increased lasting jobs, increased state tax revenue, energy independence, increased national security, and decreased health care costs. The individuals commented that TCEQ's present water use and flow plans which ignore the key environmental and water flow protections of the Guadalupe River/San Antonio Bay Committees will only serve to exacerbate the previously described damage to our wetlands and bays by coal fired power plants.

The commission responds that this rulemaking adopts environmental flow standards that will be used in water rights permitting for new appropriations of water and does not address energy solutions. Further, the commission respectfully disagrees that it had to adopt the stakeholder recommendations in their entirety because SB 3 clearly provides that the commission perform its own review of the stakeholders' recommendations. As provided in TWC, §11.02362(o), the stakeholders develop

recommendations, not final environmental flow standards, and send their recommendations to the commission. Under TWC, §11.1471, the commission is to adopt appropriate environmental flow standards "that are adequate to support a sound ecological environment, to the maximum extent reasonable considering other public interests and other relevant factors." The commission was also required to consider other factors, including human needs. However, the commission has adopted many of the stakeholders' recommendations in both basin and bay systems. The rule was not changed in response to this comment.

One individual commended the ED's staff in their efforts to incorporate the intent of SB 3 by attempting to develop a balanced standard that considers the needs of the environment, along with the needs for water for other human uses. The commenter stated that developing such a standard is hard, difficult work, and the staff's efforts are greatly appreciated.

The commission acknowledges this comment.

One individual commented that cities, industries, farmers, ranchers, and riverside landowners, plus coastal fishermen, both commercial and recreational are dependent on the water flows and have put forward recommendations that protect the rivers while

ensuring there is water for industrial and municipal needs.

The commission agrees that instream flows and inflows to bays and estuaries are important to the health of river and bay systems. Under TWC, §11.1471, the commission is to adopt appropriate environmental flow standards "that are adequate to support a sound ecological environment, to the maximum extent reasonable considering other public interests and other relevant factors." The commission has adopted many of the stakeholders' recommendations in both basin and bay systems. The rule was not changed in response to this comment.

Twenty-three individuals commented on the impact of the proposed rules on Roseate Spoonbills and other shorebirds. Five of these individuals commented that freshwater inflows are important to protect these birds and their habitat. Five of these individuals commented that protection of these birds is important for tourism and the economy. Eight of these individuals requested that TCEQ protect these birds and their habitat. One of these individuals commented that TCEQ should help the Roseate Spoonbill by not adopting the rule as written.

The commission acknowledges that healthy bay systems are important for economic and ecological reasons. The commission included freshwater

inflow standards in the adopted rule for the protection of bays and estuaries. Under TWC, §11.1471, the commission is to adopt appropriate environmental flow standards "that are adequate to support a sound ecological environment, to the maximum extent reasonable considering other public interests and other relevant factors." The commission considered all of the recommendations provided by the science team and the stakeholder groups and other relevant factors, when drafting the adopted rules. The commission believes that the adopted rules are sufficiently protective of the environment because they include a flow regime with subsistence, base, and pulse flows and also include freshwater inflow standards. The numerical values for these flow regime components are based on the values in the stakeholder reports. Under SB 3's adaptive management provisions, further analyses and studies will be performed in the future to determine whether the adopted standards, once implemented, continue to protect the environment. The commission notes that it has adopted many of the stakeholders' recommendations in both basin and bay systems. No change was made in response to this comment.

Ten individuals commented on the importance of Texas' natural resources, including wildlife, rivers, bays, and wetlands. One of these individuals commented that healthy plants and wildlife require water. Four of these individuals commented that TCEQ

should protect the environment.

The commission responds that this rulemaking adopts environmental flow standards that will be used in water rights permitting for new appropriations of water. The commission acknowledges the importance of Texas' natural resources. The commission also agrees that instream flows are important to the health of river systems. Under TWC, §11.1471, the commission is to adopt appropriate environmental flow standards "that are adequate to support a sound ecological environment, to the maximum extent reasonable considering other public interests and other relevant factors." The commission has adopted many of the stakeholders' recommendations in both basin and bay systems. The rule was not changed in response to this comment.

Sixteen individuals commented that TCEQ should protect the environment. Two of these individuals commented that the proposed rules do not provide enough water to maintain the environment in the future. Two of these individuals commented that TCEQ should adopt rules that protect the environment in the future. One of these individuals commented that the TCEQ should consider long-term sustainable protection of wetlands and the interconnectedness of these ecosystems in water flow determinations. One of these individuals commented that no one can predict the

unintended and unforeseen consequences our actions will cause. Five individuals commented that TCEQ should do what is best for the environment. One of these individuals commented that humans need to share the water with birds and other wildlife. One of these individuals commented that the environment should be protected for all of us. One of these individuals commented that if the environment is ruined, Texas will not be as great as it could be.

The commission acknowledges the comments and responds that the adopted rule applies to environmental flow standards for new applications to store, divert, or take state surface water. The commission believes that the adopted rules are sufficiently protective of the environment because they include a flow regime with subsistence, base, and pulse flows and also include freshwater inflow standards. The numerical values for these flow regime components are based on the values in the stakeholder reports. SB 3 also added TWC, §11.02362(p), which recognized the importance of adaptive management and provided that after submitting its recommendations regarding environmental flow standards and strategies to meet the environmental flow standards to the commission, each stakeholder committee prepare and submit a work plan. Issues related to wetlands and their connectedness to rivers and bays can be considered by the stakeholders in their development of a work plan. No change was made

in response to this comment.

Twenty-three individuals commented that TCEQ should adopt the stakeholders' recommendations. One of these individuals commented that partial protection is not sufficient. One of these individuals commented that TCEQ should adopt rules that are as or more protective than the stakeholders' recommendations. Four of these individuals commented that the stakeholders spent a lot of time and effort to develop recommendations that balance environmental and human water needs.

The commission is very aware of the dedication of time and money and the concern for maintaining healthy rivers and bays exhibited by the stakeholder committee. Neither the commission nor its staff takes this significant contribution lightly. The commission responds that it followed the process created by the Texas Legislature in TWC, §11.1471, to determine these flow standards. SB 3 clearly provides that the commission perform its own review of the stakeholders' recommendations. As provided in TWC, §11.02362(o), the stakeholders develop recommendations, not final environmental flow standards, and send their recommendations to the commission. Under TWC, §11.1471, the commission is to adopt appropriate environmental flow standards "that are adequate to support a sound ecological environment, to the maximum extent reasonable considering

other public interests and other relevant factors." In drafting the adopted standards, the commission considered all of the recommendations provided by the science team and the stakeholder groups and other relevant factors, including commission staff's water availability analyses. The commission is required to balance needs for the environment with other needs including human water needs. The commission notes that it has adopted many of the stakeholders' recommendations in both basin and bay systems. No change has been made in response to this comment.

Twenty individuals commented that TCEQ disregarded the stakeholders' recommendations. Three of these individuals commented that disregarding the stakeholder recommendations is not a democratic process. Four of these individuals commented that TCEQ did not follow the statute in developing its proposed rules. One of these individuals commented that the preferred strategy for water management is a stakeholder process and disregarding the stakeholders breaks with this policy. One of these individuals commented that by not honoring the stakeholder recommendations, TCEQ will not be protecting bays, estuaries, and wildlife. Five of these individuals commented that disregarding the stakeholders' recommendations ignores the time and effort the stakeholder's spent in developing their recommendations.

The commission responds that it followed the process created by the Texas

Legislature in TWC, §11.1471, to determine these flow standards. It considered all of the recommendations provided by the science team and the stakeholder groups and other relevant factors, when drafting the adopted rules. The commission is very aware of the dedication of time and money and the concern for maintaining healthy rivers and bays exhibited by the stakeholder committees. Neither the commission nor its staff takes this significant contribution lightly. SB 3 clearly provides that the commission perform its own review of the stakeholders' recommendations. As provided in TWC, §11.02362(o), the stakeholders develop recommendations, not final environmental flow standards, and send their recommendations to the commission. Under TWC, §11.1471, the commission is to adopt appropriate environmental flow standards "that are adequate to support a sound ecological environment, to the maximum extent reasonable considering other public interests and other relevant factors." The commission has adopted many of the stakeholders' recommendations in both basin and bay systems. The rule was not changed in response to this comment.

Seventeen individuals commented that TCEQ should balance environmental and human needs. One of these individuals commented that agricultural and industrial users are not the primary concerns and the environment should be considered first. Three of

these individuals commented that TCEQ should protect coastal areas from upstream users. One of these individuals commented that TCEQ should adopt rules that avoid environmentally-threatening compromises. One of these individuals commented that TCEQ's proposed rules would not provide sufficient protection and would undermine the efforts of the legislature and the stakeholders to balance human water needs while protecting rivers and bays and the jobs they support. [One of these individuals commented that the proposed rules benefit development more that ecosystems.] One of these individuals commented that river baseflow is critically important for many reasons including tourism, recreation, and protecting the natural environment both in the rivers and the bays. This individual also commented that there are other demands on the water but the state mandated stakeholder process is a good way to determine the proper balance between competing interests. One individual commented that TCEQ is making the right decision to protect water for humans, and not dedicating it for the fish and shellfish. One of these individuals commented that the rule proposal fails to provide sufficient inflow to protect river and bay resources and to provide recreation and other economic uses.

The commission acknowledges that healthy rivers and bays are important for recreation, economic, and ecological reasons. In developing the adopted rule, the commission followed its instructions in TWC, §11.1471, by balancing human and other competing needs for water with the scientific

recommendations. Under TWC, §11.1471, the commission is to adopt appropriate environmental flow standards "that are adequate to support a sound ecological environment, to the maximum extent reasonable considering other public interests and other relevant factors." In drafting the adopted standards, the commission considered all of the recommendations provided by the science team and the stakeholder groups and other relevant factors, including commission staff's water availability analyses. The commission is required to balance needs for the environment with other needs including human water needs. The commission notes that it has adopted many of the stakeholders' recommendations in both basin and bay systems. No change has been made in response to this comment.

NWF and Sierra Club-Lone Star acknowledge that, for the Colorado and Lavaca Basins, most of the core components of the unanimous stakeholder recommendations are reflected in the proposed rules and appreciate the efforts of TCEQ staff to incorporate those aspects into the proposed rules. These commenters note, however, that even there, some critically important protections are missing, and, for the Guadalupe and San Antonio Basins, the differences between the stakeholder recommendations and the proposed rules are quite massive.

The commission followed its instructions in TWC, §11.1471, to determine

these flow standards. It considered all of the recommendations provided by the science team and the stakeholder groups and other relevant factors, including commission staff's water availability analyses, when drafting the adopted rules and does not believe that the differences from the adopted rules are massive. The commission is required to balance needs for the environment with other needs including human water needs. The balancing process in areas with demonstrated future human needs can result in more consideration being given to those needs. However, the commission further responds that the adopted standards are protective of the environment and allow for some future permitting. Additionally, the existence of more scientific data which supports complex recommendations can result in more consideration being given to those recommendations. Under SB 3's adaptive management provisions, further analyses and studies will be performed in the future to determine whether the adopted standards, once implemented, continue to protect the environment. Additionally, under these adaptive management provisions, the stakeholders will have future opportunities to re-evaluate the issue of balancing human and other competing needs for water in the bay and basin systems. The rule was not changed in response to this comment, although the commission does note that §§298.290, 298.305, 298.310, 298.320 298.325, 298.330, 298.335, 298.355, 298.375, and 298.380 were modified

in response to other comments.

NWF and Sierra Club-Lone Star commented that TCEQ's proposed rules for the Guadalupe/San Antonio and Colorado/Lavaca bay and basin areas do not comply with the SB 3 / HB 3 statutory requirements for the agency's development of environmental flow standards for these bay and basin areas. These commenters specified that if the proposed standards are not shown to be adequate to protect a sound ecological environment, there must be adequate justification demonstrating that providing greater protection would not be reasonable because of the adverse impact to other public interests. These commenters stated that as the legislature has expressly noted, "{m}aintaining the biological soundness of the state's rivers, lakes, bays, and estuaries is of great importance to the public's economic health and general well being."

The commission recognizes the importance of protecting environmental interests for the "public's economic health and general well-being." The commission takes very seriously its charge from the legislature to provide to the extent practicable for freshwater inflows and instream flows necessary to maintain the viability of the state's streams, rivers, and bay and estuary systems. The legislature has recognized that these environmental interests must be balanced by the commission with "all other public interests." It is not possible or practicable to catalog a precise

weighing of countervailing interests that went into the commission's decision and is not required by statute. However, as explained elsewhere in this preamble, one of the important factors for the commission was to preserve the ability to permit at least some future surface water projects for human needs. The commission has provided a more complete explanation of its decision in this preamble. The commission has made some changes in response to comment as discussed in this preamble. The commission declines to make further changes.

NWF, Sierra Club-Lone Star, OPIC, and CCA comment that TCEQ has not fulfilled the statutory directive to set aside unappropriated water to protect the proposed environmental flow standards. The commenters recommend that the rules adopt set-asides, although no commenter suggested specific set-aside values. In the commenters' view TCEQ's justification is inadequate. In the absence of a demonstration that special conditions can reliably satisfy applicable environmental flow standards, environmental flow set-asides are needed. One particular value of environmental flow set-asides is that they establish an affirmative right for environmental flow protection with a priority date that would allow TPWD to act in the role of a water right holder to enforce the right and to make a priority call for that water. If the commission does not establish environmental flow set-asides at this time, it will be critical for the commission to acknowledge and respect the availability determinations noted in the proposed rules in

future water rights permitting decisions in order to retain and protect its ability to meaningfully revisit the issue of establishing environmental flow set-asides during the first revision process for these standards. The NWF and Sierra Club-Lone Star recognize that neither BBASC included a recommendation for set-asides. However, in the absence of the adoption of flow standards at least as protective as the recommendations of the BBASCs, TCEQ certainly has not justified its failure to establish environmental flow set-asides.

OPIC points out that TWC, §11.1471(a)(2), states that "{t}he commission by rule shall . . . establish an amount of unappropriated water, if available, to be set aside to satisfy the environmental flow standards to the maximum extent reasonable when considering human water needs." Only if the use of set-asides does not meet the flow standards should the commission then look to market approaches and other means of preserving water for environmental flows under TWC, §11.0235(d-3)(2). Without set-asides, the commission has not fully implemented the legislature's mandate. The proposal declines to include set-asides because the flow standards are protective of a sound ecological environment. Yet, set-asides are a mechanism used to achieve environmental flow standards, not the standards themselves, as demonstrated by the language in TWC, §11.1471(a)(2), that available unappropriated water must be set aside "to satisfy the environmental flow standards." Thus, the question of whether the standards are protective is a separate question from how to meet the standards. Although flexibility is

generally an important goal, a preference for special conditions is not a justification allowed by TWC, §11.1471(a)(2), and should not be used as a basis for declining to set aside water. The "human water needs" limitation on set-asides refers to the appropriate amount of the set-aside, not whether it is appropriate to establish them at all. The flexibility provided by special conditions is exactly what set-asides are designed to prevent, in OPIC's view.

In the CCA's view the set-aside to satisfy environmental flow standards, can be reduced only to the extent required by one or more of the TWC, §11.1471(a)(1), factors, out of "unappropriated water, if available." In their view the question of whether there is "unappropriated water" available is a question for when there is a permit application claiming that there is unappropriated water available. The only reduction in the set-aside that the TCEQ is authorized to adopt by rule now is down to the "maximum extent reasonable when considering human water needs." If the TCEQ considers a reduction in the science-based set-aside necessary because of anticipated human water needs for which no permit application has even been filed, it must explain what those anticipated human water needs are, and why they are reasonably anticipated, and why they require a maximum set-aside below the science-based set-aside. "Human water needs" is narrower language than "other public interests and other relevant factors." The commission's reductions in set-asides must be based on future additional "human water needs," in the view of the CCA.

The commission respectfully disagrees that set-asides are mandated if the commission finds that there is any amount of water available at any time. The commission does not interpret SB 3 to mean that all water available for appropriation up to the amount of the standard must be set aside. TWC, §11.1471(a)(2), provides that the commission determine whether "an amount" of unappropriated water should be set aside.

Even assuming that water is available for a set-aside, TWC, §11.1471(a)(2), qualifies the requirement for a set-aside as "to the maximum extent reasonable when considering human water needs." In these basins the commission has determined that set-asides are not reasonable because of limited water availability. Because of water availability issues in these basins, special conditions placed in a permit are a more effective method to protect flows in the stream when new appropriations of water are granted while providing water for future human needs. This is because if special conditions are used there are other sources of water in a stream that could be used to meet environmental flow requirements in a permit; for example, water appropriated to downstream water right holders, water appropriated to another but not used, or return flows. Additionally, set-asides require a water availability determination, and these sources would not be used to

determine water availability because they would not be considered to be unappropriated water.

The commission is only determining in this rulemaking to not establish set-asides at this time for these basins. After gaining further experience with implementation of environmental flows standards, as part of the adaptive management process, the commission is willing to revisit the issue. The commission recognizes the value of the ability of TPWD to enforce a set-aside. However, because of the necessity of leaving the ability to utilize some of the remaining unappropriated water in the basin for human water needs, the commission declines to establish any set-asides.

The commission recognizes that the preference for special conditions is not a named factor in TWC, §11.1471(a)(2), for not having a set-aside. However, the ability of special conditions to meet the environmental flow standard while at the same time allowing water to be available for appropriation makes the use of special conditions a more reasonable approach to protecting the environmental flow standards considering human water needs.

The commission respectfully disagrees that the availability determination

would be made, not at the time of the rulemaking, but later during a determination on a permit application. If availability decisions were made later the commission might set aside water to meet the standard when in fact no water was available. In that situation the commission would not know if it had struck the appropriated balance between environmental needs and other public interests until a permitting hearing where the commission would learn that no water was available for human water needs because all unappropriated water had been set aside in its rulemaking. The plain language of the statute means that a set-aside can occur only if unappropriated water is available. The commission notes that the state and regional water plans for Guadalupe and San Antonio basins call for future development of surface water projects to meet human water needs within the 50-year planning horizon. No change was made in response to these comments.

OPIC commented that the proposal appears to rely on an assumption that HB 3/SB 3 requires the commission to make water available for appropriation for human water needs. Under TWC, §11.0235(c) and §11.1471(b), the commission must consider a variety of factors, including environmental needs, the public interest, human water needs, and economic factors, when establishing the flow standards. OPIC commented that under TWC, §11.02362(o), the stakeholders must also engage in the same balancing

analysis. OPIC commented that HB 3/SB 3 does not require the commission to make water available for appropriation at the expense of environmental needs. OPIC commented that the amendment to TWC, §11.023(a) states, "To the extent that state water has not been set aside by the commission under Section 11.1471(a)(2) to meet downstream instream flow needs or freshwater inflow needs, state water may be appropriated, stored, or diverted for {various purposes}." This language makes clear that the legislature contemplated in some instances an absence of water available for appropriation after the use of set-asides.

The commission responds that although it must consider human needs in this rulemaking it is not specifically required by statute to make water available for appropriation. However, the commission, in the exercise of its discretion under the statute, believes that it is more appropriate to maximize the use of every drop of water to benefit both the environment and other public interests. Further, the commission has determined that for this basin, after the appropriate balance including consideration of environmental needs and other human water needs, the standards adopted today are the most appropriate. The commission does not believe that its consideration of future human water needs has significantly reduced the adopted environmental flow standards because the adopted rule includes a flow regime consisting of subsistence flow, base flow, and high flow pulses,

as well as freshwater inflow standards. In addition, the commission notes unappropriated water that is available in these river basins is available only during relatively wet conditions. Based on the fact that unappropriated water is limited, the environmental flow standards may be adequately protected by special conditions in water right permits or amendments for new appropriations of water in these basins. The rule was not changed in response to this comment.

OPIC recommends some changes related to the commission's process for incorporating stakeholder committee recommendations into proposed rules. Because the process for establishing environmental flow standards is new, somewhat unique in Texas law, and requires stakeholders to spend significant time and money, OPIC recommends the ED go beyond the minimum Administrative Procedures Act requirements and provide a more detailed explanation of changes in the proposal, with accompanying scientific or policy justifications for deviations from the stakeholder report. OPIC commented that greater detail in the proposal may prevent future conflicts over the ED's decisions to include, reject, or modify stakeholder recommendations.

The commission acknowledges and appreciates the significant dedication of time and money and the concern for maintaining healthy rivers and bays exhibited by the stakeholder committees in developing their

recommendations. The commission agrees that it is important to explain its rationale in drafting proposed rules. Commission staff provided detailed information and explanations of the modeling, science, and balancing, including a discussion of the differences in the models that were used by the stakeholders and TCEQ. These meetings were held after the proposal to discuss information included in the preamble in order to assist these groups with developing comments on the proposed rule and to listen to their concerns. In addition to these meetings, staff also responded to a number of individual requests for information and explanation, including requests from members of the Bay and Basin Expert Science Team (BBEST) and the consultant for the BBASC after proposal in order to provide further assistance. The commission has also made the models used in its decisions available on its Web site.

The commission notes that SB 3 clearly provides that the commission perform its own review of the stakeholders' recommendations. As provided in TWC, §11.02362(o), the stakeholders develop recommendations not final environmental flow standards, and send their recommendations to the commission. Under TWC, §11.1471, the commission is to adopt appropriate environmental flow standards "that are adequate to support a sound ecological environment, to the maximum extent reasonable considering

other public interests and other relevant factors." The commission has followed the statute in this regard and has provided explanation of its rationale. The rule was not changed in response to this comment.

NWF and Sierra Club-Lone Star commented that the rationale in the proposed rule for deleting larger pulses is insufficient. The commenters commented that the TCEQ staff's rationale for deleting pulses between the seasonal pulses and the overbank pulses is that there isn't a site-specific study to support pulse recommendations with durations of longer than 30 days. First, SB 3 does not contemplate waiting for site-specific studies. To the contrary, it provides that recommendations are to be based on the best available science now, while some unappropriated water is still available to be protected, and then are to be refined over time through the work plan process. Second, there is certainly no shortage of studies or literature acknowledging the need for a full regime of pulse flows. Guidance from the SAC, the science team report, the SB 2/Texas lnstream Flow Program (TIFP) site-specific studies, and the National Research Council Review of the TIFP all discuss the importance of a full regime of pulse flows. Protections of larger pulses are not only critical for riverine considerations, such as channel geomorphology, water quality considerations and invasive species control for example, but are also essential for maintaining bay and estuary health. Eliminating protection for these larger pulses, critically important freshwater inflows necessary to maintain a sound ecological environment could be captured. NWF and Sierra Club-Lone Star commented that this

loss of protection is particularly damaging for the San Antonio Bay system during the fall and winter periods for which no quantified freshwater inflow protections are available to provide a backstop for inflow protections.

The commission acknowledges that overbank flows are a component of a flow regime for a sound ecological environment. However, the flows the commission is protecting in the adopted rule are not calculated to result in water flowing out of the banks of the river. The commission further responds that there was little site-specific information that would assist it in drafting the adopted standards although the commission acknowledges that there was some information available that was considered by the stakeholders. The commission also notes that the specific high flow pulse levels and frequencies in the science team and stakeholders' reports are mostly based on a statistical representation of historic streamflows and there was little scientific information tying these specific statistics to environmental water needs. The adopted standards incorporate subsistence flows, base flows, high flow pulses, and application of the adopted rules to permits subject to this subchapter will result in flow variability after diversions under those permits occur. To the extent that additional information becomes available through monitoring and studies as part of adaptive management, the science team and stakeholders could

consider that information in future deliberations and recommend different flow values for consideration during future rulemaking. The commission further responds that leaving some water available for new permits will not prevent these larger flood events from occurring because they will occur naturally. The rule was not changed in response to these comments.

NWF and Sierra Club-Lone Star commented that the rationale in the proposed rule for deleting overbank flows from the rules is insufficient. They commented that the stated basis for not including overbank flows is that they are generated by natural rain events and are expected to continue. The commenters stated that like all pulses and, indeed, all freshwater inflows, they also expect them to continue unless a project big enough to catch them is built. They said that is the whole point of including protection of those flows in the BBEST and BBASC recommendations and it is why those protections should be included in environmental flow standards. NWF and Sierra Club-Lone Star commented that large on-channel reservoirs can produce large reductions in overbank flows and that overbank flows provide many critical ecological functions, such as providing life cycle cues for many species, seed dispersal, floodplain connectivity and nutrient deposition, and providing freshwater inflow and sediment delivery to bays and estuaries. They commented that all water comes from natural rain events.

The commission acknowledges that overbank flows are a component of a

flow regime for a sound ecological environment. However, these flows have the potential to inundate low-lying areas. The flows the commission is protecting in the adopted rule are not calculated to result in water flowing out of the banks of the river. The commission notes that the 2011 Region F, Region K, or Region L Water Plans did not include any on-channel water supply projects in the basin and bay systems covered by the adopted rules that would impact overbank flows. The commission believes that the adopted rules are sufficiently protective of the environment because they include a flow regime with subsistence, base, and pulse flows and also include freshwater inflow standards. The numerical values for these flow regime components are based on the values in the stakeholder reports. Under SB 3's adaptive management provisions, further analyses and studies will be performed in the future to determine whether the adopted standards, once implemented, continue to protect the environment. No change has been made in response to this comment.

CCA commented that the assumption is that WAM should be used to determine appropriate environmental flow standards but that this mixes apples and oranges. CCA stated that the WAMs are for modeling potential water availability under existing permits in a repeat of the drought of record, not for determining appropriate environmental flow standards. CCA commented that for modeling potential water

availability, the WAMs assume: 1) a repeat of drought of record; 2) full utilization of all previous permitted rights; and 3) no return flows. CCA commented that such assumptions may be entirely appropriate with regard to modeling potential availability for new permitting but with respect to science-based appropriate environmental flow standards for different seasons in wet- years, average years, and drought years, assumptions (2) and (3) are completely counterfactual, and the drought of record is one but only one important data point. CCA commented that a model's projection that, in a repeat of the drought of record, and if every permittee used all water permitted to it and if none had any return flows, environmental flow standards would not be met in 18% of the years is not a reason why such standards should not be set under TWC, §11.1471(a)(1).

The commission responds that it followed the process created by the Texas Legislature in TWC, §11.1471, to determine these flow standards. It considered all of the recommendations provided by the science team and the stakeholder groups and other relevant factors, including staff's water availability analysis, when drafting the adopted rules. In developing the adopted rule, the commission balanced human and other competing needs for water with the scientific recommendations. Under TWC, §11.1471, the commission is to adopt appropriate environmental flow standards "that are adequate to support a sound ecological environment, to the maximum

extent reasonable considering other public interests and other relevant factors."

The commission did not use the WAM to develop specific values for flow regime components. These values were based on the stakeholders' recommendations, which were, in turn, based on the recommendations of their science teams. The WAM was used for the balancing analysis discussed previously. A scenario representing future human water needs was modeled with the stakeholders' recommended environmental flow standards. Specific values were adjusted until a reasonable balance was achieved. Because the adopted standards will apply to new appropriations of water issued after September 1, 2007, and availability determinations for new appropriations are modeled assuming a repeat of the drought of record, full utilization of permitted rights, and no use of return flows, it is appropriate to use those assumptions while testing stakeholders' recommended flow standards to determine impacts on future water rights permitting. The commission notes that it has adopted many of the stakeholders' recommendations in both basin and bay systems. The rule was not changed in response to this comment.

CCA commented that TCEQ also proposes not to include stakeholder recommendations

for pulse flows with return periods longer than one year (with the exception of the lower Colorado River below Lake Travis). CCA stated that TCEQ offers two bases for this decision. First, it states that there was "little" site-specific information supporting these specific higher pulse flow levels and frequencies. CCA commented that TCEQ's explanation makes clear that some such information is available, but it does not explain why it is not enough, or how much more is necessary to justify this otherwise arbitrary decision.

The commission responds that there was little site-specific information that would assist it in drafting the adopted standards, although the commission acknowledges that there was some information available that was considered by the science team. As noted in this preamble, the commission considered the information in the science team's report. However, there was no site-specific information tying these pulse durations to environmental needs. The commission reviewed the hydrographic separation which formed the basis for the science team's recommendations. In some instances, these large pulses appear to be comprised of one or more pulses connected by intervening periods of high base flows. This creates uncertainty regarding the calculations of these pulses because the identified pulses likely represent more than one pulse flow event. In addition as stated in this preamble, these higher pulses

impact remaining unappropriated water. Further analysis and studies may need to be performed in the future to determine appropriate magnitudes, volumes, and durations of these larger pulse events. HB 3/SB 3 contemplates that these types of studies can be considered through adaptive management via the work plan for this basin and bay system. To the extent that additional information becomes available through monitoring and studies undertaken under the work plan, the science team could consider this information in future deliberations. The rule was not changed in response to this comment.

CCA stated that TCEQ asserts that it "based its decisions on considerations of the recommendations from the stakeholders, sound science, and other public interests and relevant factors." CCA commented that such generalities are not reasoned justifications as required by Texas law. CCA asks that TCEQ publish a new notice, of science-based environmental flow standards and set-asides, and with proposed reasoned justifications in terms of the facts as to each non-science factor on which the TCEQ proposes that environmental flow standards below the science-based level and set-asides below the appropriate flow standard level are the maximum reasonable. Only then can CCA and other interested persons comment meaningfully under SB 3 and the Texas Government Code.

The commission respectfully disagrees that this level of detail is required, or even reasonable for this rulemaking. The commission accepted most of the work that the science teams and stakeholders performed, but also balanced human and other competing needs for water, as required by statute. The state of the science for determining these specific environmental flow standards is by no means developed or settled because of data gaps and lack of specific information and studies in many areas within these basin and bay systems. This is the reason HB 3/SB 3 included an adaptive management process for revision and modification of the standards if and when more specific scientific data becomes available. The rule was not changed in response to this comment.

TPWD commented that under Texas Parks and Wildlife Code, §12.0011(c), a written response to these TPWD recommendations and comments received by a state governmental agency may be required.

The commission acknowledges the comment.

TPWD commented that it and other interested parties provided preliminary written and oral comments sharing the view that the proposed rules lack clear language explaining the TCEQ analyses and reasoning for departures from the stakeholder

recommendations. TPWD commented that in this rule proposal and future proposals, it would be helpful to document the data, information, and rationale used by the TCEQ staff. They further commented that all participants in this process would benefit from a clear understanding of how the TCEQ evaluates scientific data and analysis and the identification of the environmental or policy factors that influence the crafting of flow standards. TPWD commented that the proposed rules should include an equal level of documentation and explanation. For example, if a threshold amount of unappropriated flows is required to remain in each stream segment following application of the environmental flow standards, then the amount should be identified and the analytical methodology should be documented and explained.

The commission acknowledges the importance of transparency and has made efforts to be transparent in the process of developing the adopted rules. In the Section by Section Discussion for §298.330 and §298.380 in the preamble, the commission identifies the science team reports, stakeholder committee reports, its water quality and water availability analyses, comments on the proposed standards and other information it relied upon in developing the adopted standards. Additionally, in the Section by Section Discussion for §298.330 and §298.380, the commission discusses the balancing analysis it performed and identifies the Web site where the models used for the balancing analysis are available for

download. The commission notes that it considers each basin and bay system individually, so the factors considered in balancing can vary. The commission further notes that §§298.305, 298.310, 298.320 298.325, 298.330, 298.335, 298.355, 298.360, 298.375, and 298.380 were modified in response to other comments.

TPWD commented that as environmental flow standards will soon be translated into permit conditions, guidance on implementation of the standards is needed and would be helpful in evaluations of future flow standards rule proposals. TPWD stated that this type of guidance was requested by the TCEQ commissioners in April 2011. TPWD staff is available to assist TCEQ staff in developing a guidance document.

The commission responds that staff is working on implementation and this document will be made available to the public when completed.

Five individuals commented that growth should be sustainable. One of these individuals commented that the proposed rule violates the concepts of sustainable development. One of these individuals commented that development should be restricted to protect the environment.

The commission acknowledges the comment and responds that the adopted

rule applies to environmental flow standards for new applications to store, divert, or take state surface water. The commission believes that the adopted rules are sufficiently protective of the environment. Under SB 3's adaptive management provisions, further analyses and studies will be performed in the future to determine whether the adopted standards, once implemented, continue to protect the environment. No change was made in response to this comment.

Fifteen individuals commented on the impact of the proposed rules on bays and estuaries. Five of these individuals commented that the proposed rules would not provide enough water to support commercial fishing. Three individuals commented about the importance of bays and estuaries to the economy. Eight of these individuals commented on the importance of freshwater to the environmental health of bays and estuaries.

The commission acknowledges that healthy bay systems are important for economic and ecological reasons. The commission included freshwater inflow standards in the adopted rule for the protection of bays and estuaries. The commission responds that under TWC, §11.1471, the commission is to adopt appropriate environmental flow standards "that are adequate to support a sound ecological environment, to the maximum

extent reasonable considering other public interests and other relevant factors." The commission followed the statute in adopting these rules. No change was made in response to this comment.

Five individuals commented that TCEQ's proposed rules are not based on science. Three of these individuals commented that TCEQ did not provide a scientific basis for how the proposed rules are adequate to protect a sound ecological environment.

The commission responds that it did not disregard the science team recommendations, or the SAC's review of those recommendations. In addition, the commission performed its own water quality and water availability analyses for the adopted standards. Under TWC, §11.1471, the commission is to adopt appropriate environmental flow standards "that are adequate to support a sound ecological environment, to the maximum extent reasonable considering other public interests and other relevant factors." The commission is required to balance needs for the environment with other needs including human water needs. The commission followed the statute in adopting this rule. The commission notes that it has adopted many of the stakeholders' recommendations in both basin and bay systems. The rule was not changed in response to this comment.

Six individuals commented on drought issues. One of these individuals commented that the drought in 2010 was more severe because of groundwater withdrawals. Two of these individuals commented that protecting rivers would provide enough water in droughts to keep the bays healthy. One of these individuals commented that TCEQ's proposal ignores drought and a percentage of rainwater should be left in the river to flush it.

The purpose of this rulemaking is to establish environmental flow standards that will only apply to new appropriations of water and amendments that grant new appropriations of water after September 1, 2007. The commission followed its instructions in TWC, §11.1471, to determine these flow standards. It considered all of the recommendations provided by the science team and the stakeholder groups and other relevant factors, including commission staff's water availability analyses, when drafting the adopted rules. The commission notes that the adopted rules include subsistence flow levels that will limit diversions during extremely dry periods for permits to which this rule applies. No change has been made in response to this comment.

One individual commented that Texas is one of the worst states for clean public spaces and has poor results on the American State Litter Scorecard.

The commission responds that the purpose of this rulemaking is to establish environmental flow standards that will only apply to new appropriations of water and amendments that grant new appropriations of water after September 1, 2007. Littering was not considered in this rulemaking.

An individual commented that TCEQ should have learned from the experience of developing rules in the Trinity and San Jacinto Basins. The commenter acknowledges the problem of evaluating what flow level is necessary for ecosystem health. However, the commenter states that Texas has rightly committed to science-based environmental flows policy that draws upon scientific expertise and stakeholder recommendations to craft regulations that are protective of the environment and reflective of Texas' priorities. The commenter expressed concern that TCEQ's failure to adopt adequately protective standards based on the process adopted by the state legislature in SB 3 would undermine the committees' work and that TCEQ should honor legislative intent and replace the proposed rules with rules that accurately reflect the committees' work.

The commission responds that it followed the process created by the Texas Legislature in TWC, §11.1471, to determine these flow standards. The commission is required to balance needs for the environment with other needs including human water needs. The commission did not disregard the

stakeholders' recommendations. HB 3/SB 3 clearly provides that the commission perform its own review of the stakeholders' recommendations. Under TWC, §11.1471, the commission is to adopt appropriate environmental flow standards "that are adequate to support a sound ecological environment, to the maximum extent reasonable considering other public interests and other relevant factors." The commission followed the statute in adopting this rulemaking. The commission notes that it has adopted many of the stakeholders' recommendations in both basin and bay systems. The rule was not changed in response to this comment.

Subchapter C: Sabine and Neches Rivers and Sabine Lake Bay

NWF and Sierra Club-Lone Star commented that they support a five-year revision cycle for the environmental flow standards for Subchapter C (Sabine and Neches Rivers, and Sabine Lake Bay) of Chapter 298, although they believe the proposed deadline of September 1, 2013 for the submission of stakeholder recommendations is too aggressive to allow for development of information through the work plan activities needed to inform revision of the standards. These commenters recommended that the deadline for stakeholder recommendations be set for September 1, 2014, with the next set of recommendations being due September 1, 2018. After the 2018 deadline, any subsequent reviews would be due on a five-year cycle.

The commission respectfully disagrees with the comment. The stakeholders in this basin proposed that the review schedule for the environmental flow analyses and environmental flow regime recommendations, environmental flow standards, and strategies occur on a five-year cycle, integrated with the SB 1 (75th Legislature, 1997) Regional Water Planning five-year cycle and that the periodic review schedule for SB 3 environmental flow standards be aligned so that the review is available for consideration by the Regional Planning Groups in each round of Regional Water Planning. The adopted rule sets out a revision schedule on a five-year cycle that is aligned with the Regional Water Planning Cycle. The approved work plan for this basin proposes some studies that will be completed by September 1, 2013. These studies could provide additional information at some locations, which the stakeholders could consider. Therefore, the commission adopts the five-year cycles beginning in 2013, as requested by the stakeholders. The rule was not changed in response to this comment.

NWF and Sierra Club-Lone Star commented that the proposed rule would make the revision process contingent on receiving a recommendation from the stakeholder committee recommending that revisions to the environmental flow standards should be

pursued. That is not consistent with TWC, §11.1471(f). That provision does not make revision of the flow standards contingent on receiving a stakeholder committee recommendation that revisions are needed. The legislation does contemplate that stakeholder participation must play an ongoing role in that process, but future reviews and revisions may not be made contingent on stakeholder committees, that may not even exist, making recommendations calling for those reviews or revisions. These commenters recommended that the proposed changes to §298.290 be revised to read as follows: "The adopted environmental flow standards or environmental flow set-asides for the Sabine and Neches Rivers, their associated tributaries, and Sabine Lake Bay may be revised by the commission through the rulemaking process. The Sabine and Neches basin and bay area stakeholder committee, or any other entity implementing the work plan, shall submit their review, if any, of the adopted environmental flow standards by September 1, 2014, with the next review, if there is one, to be submitted by September 1, 2018, and any subsequent reviews due every five years thereafter. If the commission determines that revisions to the adopted environmental flow standards are appropriate at the time that reviews are due, the rulemaking process shall be undertaken in conjunction with the periodic review. The final revised rules arising from a rulemaking undertaken in conjunction with any such periodic review shall be effective within one year after the deadline for the review of the adopted environmental flow standards. The rulemaking process shall include participation by a balanced representation of stakeholders having interests in the Sabine and Neches Rivers, their associated

tributaries, and Sabine Lake Bay."

The commission agrees in part but responds that TWC, §11.1471, requires that the rulemaking process provide for the participation of stakeholders having interests in that particular bay and basin system. Therefore, the commission believes that the cycle for rulemaking should be consistent with the BBASC schedule. However, the commission does agree that the language in the rule regarding the effective date of final rule revisions, if any, could be clarified. The adopted rule was changed to reflect this revision.

Subchapter D: Colorado and Lavaca Rivers and Matagorda and Lavaca Bays

§298.305, Definitions

NWF and Sierra Club-Lone Star commented that the definition of "Dry condition" should specify that the approximately 20% of time being referenced is the drier period of time that does not include severely dry conditions rather than simply any 20% of time. The commenters requested that §298.305(4) be revised to include the phrases "and that is intended to represent periods when conditions are dry but not severe" and "and that is intended to represent periods when conditions are drier than average but not severe."

The commission agrees and §298.305(4) was modified to include this

change.

TPWD commented that the definition of "Dry condition" states that dry is the hydrologic condition that would occur approximately 45% of the time in the Colorado River downstream of Lake Travis. A more appropriate frequency of occurrence would be 20% as is applied to all other points in the Colorado-Lavaca Basin and Bay Area.

The commission responds that the frequency of dry conditions on the Colorado River downstream of Lake Travis in the adopted rule is the frequency recommended by the stakeholders. These locations have two levels of base flows, which are based on a site-specific study. The commission's opinion is that the stakeholders' recommended frequency is appropriate for these locations. No change was made in response to this comment.

NWF and Sierra Club-Lone Star commented that the definition of "Fall inflow quantity" in §298.305(6) should make clear that it is referring to the maximum amount during any three consecutive months in the defined period during a particular calendar year. These commenters request that §298.305(6) be revised to include the phrase "during any individual calendar year."

The commission agrees and §298.305(6) was modified to include this change.

NWF and Sierra Club-Lone Star commented that the definition of "Fall season quantity" should make clear that it is referring to the maximum amount during any three consecutive months in the defined period during a particular calendar year. These commenters request that §298.305(7) be revised to include the phrase "during any individual calendar year."

The commission agrees and §298.305(7) was modified to include this change.

NWF and Sierra Club-Lone Star commented that the definition of "Inflow regime level" in §298.305(10) should include a reference to the regimes defined in the figures located in §298.330(a)(2) and (c) and that the definition should track the terminology used. These commenters requested that §298.305(10) be revised to include the words and phrase "one of," "that includes a spring season quantity, a fall season quantity, and an intervening season quantity as described in the figure located in §298.330(a)(2)," "inflow," "inflow," and "as described in the figure located in §298.330(c)" and to delete the word "season."

The commission agrees and §298.305(10) was modified to include this change.

NWF and Sierra Club-Lone Star commented that the definition of "Severe condition" should specify that the approximately 5% of time being referenced is the driest period of time rather than simply any 5% of time. These commenters requested that §298.305(14) be revised to include the phrase, ". . . and that is intended to represent the driest periods."

The commission agrees and §298.305(14) was modified to include this change.

NWF and Sierra Club-Lone Star commented that the definition of "Spring inflow quantity" should make clear that the definition is referring to the maximum amount during any three consecutive months in the defined period during a particular calendar year. The commenters requested that §298.305(16) be revised to include the phrase, "during any individual calendar year."

The commission agrees and §298.305(16) was modified to include this change.

NWF and Sierra Club-Lone Star commented that the definition of "Spring season quantity" in §298.305(17) should make clear that the definition is referring to the maximum amount during any three consecutive months in the defined period during a particular calendar year. These commenters requested that §298.305(17) be revised to include the phrase "during any individual calendar year."

The commission agrees and §298.305(17) was modified to include this change.

NWF and Sierra Club-Lone Star commented that the definition of "Wet condition" should specify that the approximately 25% of time being referenced is the wettest period of time rather than simply any 25% of time. These commenters requested that §298.305(20) be revised to include the phrase "and that is intended to represent the wettest conditions."

The commission agrees and §298.305(20) was modified to include this change.

§298.310, Findings

NWF and Sierra Club-Lone Star commented that §298.310(b) does not accurately track the proposed rules because it does not acknowledge that the rules includes multiple

levels of base flows and multiple levels of pulse flows. These commenters request that §298.310(b) be revised to include references to multiple levels of base and pulse flows and hydrologic conditions.

The commission responds that subsistence flows, base flows, and high flow pulses are components of a flow regime for a sound ecological environment and that this is reflected in the adopted rule. The rule was not changed in response to this comment.

NWF and Sierra Club-Lone Star commented that §298.310(c) does not currently acknowledge that the proposed inflow standards for Matagorda Bay and Lavaca Bay include freshwater inflow quantities that not only vary by season but also from year to year. NWF and Sierra Club-Lone Star further commented that this provision should acknowledge the importance of targets for implementation of strategies to increase inflows above levels expected with full exercise of existing water rights. The commenters requested that subsection (c) be changed to: "(c) For Matagorda and Lavaca Bays, the commission finds that the sound ecological environment of Matagorda and Lavaca Bays can best be maintained by a set of freshwater inflow standards that include freshwater inflow quantities that vary by season and from year to year and that incorporate targets for implementing strategies to increase inflow regime level achievement above the frequencies expected with full exercise of existing water rights."

The commission agrees in part and §298.310(c) has been modified to reflect this comment. The commission respectfully disagrees that this provision should reference full exercise of existing water rights. This finding references the conditions that exist today. HB 3/SB 3 is an adaptive management process. As such, the determination of whether a sound ecological environment exists at some future date, and how that sound ecological environment should be protected, is a topic that can be considered by future science team and stakeholder groups when considering recommendations for revisions to the adopted rules.

NWF and Sierra Club-Lone Star commented that §298.310 fails to include any findings regarding East Matagorda Bay. NWF and Sierra Club-Lone Star commented that the stakeholders identified conditions in East Matagorda Bay as being of particular concern and recommended a narrative standard for protection of inflows to East Matagorda Bay. These commenters requested that a new subsection (d) be added to §298.310 to read as follows: "(d) Although not adopting quantified environmental flow standards specifically applicable to East Matagorda Bay. The commission does find that, in order to provide a sound ecological environment in East Matagorda Bay, reductions in inflows from new authorizations should be avoided and strategies to maintain and increase freshwater inflows should be pursued."

The commission agrees and in response to this comment a new §298.310(d) was included in the adopted rule. The new subsection provides that although the commission is not adopting environmental flow standards for East Matagorda Bay, it does find that reductions in inflows should be avoided and strategies to provide additional freshwater inflows should be pursued.

§298.320, Calculation of Hydrologic Conditions

NWF and Sierra Club-Lone Star commented that they appreciate the obvious attempt by TCEQ to reflect stakeholder committee recommendations in the development of the hydrologic condition provisions in §298.320. These commenters further stated that subsections (b) - (d) set out the initial hydrologic condition indicators to be used in governing permit operations for permits subject to these standards; however, the rule needs to be clarified to provide for ongoing, periodic revisions of the hydrologic condition indicators set out in subsections (b) - (d). These commenters requested that the commission add a new subsection (g) as follows: "(g) The hydrologic condition indicators set out in subsections (b) - (d) are intended for use to govern the operations of permits subject to this subchapter during the initial period, of not longer than ten years, until the environmental flow standards in this subchapter are amended. Those indicators were calculated to achieve compliance with the percentages of time stated in

subsections (e) and (f). The hydrologic condition indicators set out in subsections (b) - (d) will be recalculated periodically, no less frequently than once every ten years, in order to achieve, to the greatest extent possible, compliance with the percentages of time stated in subsections (e) and (f) on an ongoing basis. Permits subject to these standards shall include special conditions providing for the periodic recalculation of the applicable hydrologic conditions in accordance with this provision."

The commission agrees in part and included a new §298.320(g) in the adopted rule and modified the Section by Section Discussion for §298.320. The new subsection provides that the hydrologic condition indicators in the adopted rule are intended to apply during the initial ten-year period and will be recalculated at least once every ten years. The commission did not include a requirement in the adopted subsection related to permit conditions. New §298.320(g) requires that the hydrologic conditions be recalculated at least once every ten years. Adopted §298.325 specifies how diversions under subsistence and base flows will be governed by hydrologic conditions; therefore, this provision is not necessary.

§298.325, Schedule of Flow Quantities

NWF and Sierra Club-Lone Star commented that there is some ambiguity in the proposed language for §298.325(c) about what base flow criterion applies during severe

hydrologic conditions because nothing in §298.325(b) addresses what happens during severe hydrologic conditions when flows are above the applicable base flow level. These commenters requested that §298.325(c) be revised to include the sentence, "For all measurement points, the dry base flow standard applies during severe hydrologic conditions."

The commission agrees and §298.325(c) was modified to include this change.

NWF and Sierra Club-Lone Star commented that in the preamble discussion TCEQ acknowledges that overbank flows and flushing flows for the bays and estuaries are considered to be components of a flow regime for a sound ecological environment. These commenters state that the omission of these flows is unjustified because a key purpose of the standards is to protect such events when they do occur in the future from being unduly altered by new impoundment or diversion facilities. These commenters further state that absent a showing that protecting such ecologically important flows, which are necessary to protect a sound ecological environment, is not achievable because that protection would result in an unreasonable adverse impact to other public interests, the flow standards must include such protection.

Under TWC, §11.1471, the commission is to adopt appropriate

environmental flow standards "that are adequate to support a sound ecological environment, to the maximum extent reasonable considering other public interests and other relevant factors." In adopting these standards, it must consider the environmental flow analysis and the recommended environmental flow regime developed by the science team, and the recommendations developed by the stakeholders. However, the commission must also perform its own analysis. The commission acknowledges that overbank flows and flushing flows are a component of a flow regime for a sound ecological environment. However, the commission is also aware that these flows have the potential to inundate low-lying areas. The flows the commission is protecting in the adopted rule are not calculated to result in water flowing out of the banks of the river. The rule was not changed in response to this comment.

§298.330, Environmental Flow Standards

ES requested that the commission remand the proposed standard back in support of the consensus recommendations presented by the stakeholder committee.

The commission followed its instructions in TWC, §11.1471, to determine these flow standards. It considered all of the recommendations provided by the science team and the stakeholder groups and other relevant factors,

when drafting the adopted rules. The commission respectfully disagrees that it had to adopt the stakeholders' recommendations in their entirety because SB 3 clearly provides that the commission perform its own review of the stakeholders' recommendations. As provided in TWC, §11.02362(o), the stakeholders develop recommendations, not final environmental flow standards, and send their recommendations to the commission. Under TWC, §11.1471, the commission is to adopt appropriate environmental flow standards "that are adequate to support a sound ecological environment, to the maximum extent reasonable considering other public interests and other relevant factors." The commission has adopted many of the stakeholders' recommendations. The commission believes that the adopted rules are sufficiently protective of the environment, because they include a flow regime consisting of subsistence flows, base flows, high flow pulses, and a freshwater inflow standard. Under SB 3's adaptive management provisions, further analysis and studies will be performed in the future to determine whether the adopted standards, once implemented, continue to protect the environment.

NWF, Sierra Club-Lone Star, TPWD, ES, and CCA commented that the commission should adopt the stakeholders' recommended pulse flows. NWF and Sierra Club-Lone Star commented that the commission has not justified the failure to include protection

for pulse flows at least of the size and frequency unanimously recommended by the stakeholders. NWF and Sierra Club-Lone Star further commented that the stakeholders undertook a careful balancing exercise, which resulted in very large reductions in recommendations for pulse size below the levels identified by the science team as being adequate to protect a sound ecological environment. Those pulse sizes are all below flood stage levels. NWF and Sierra Club-Lone Star also commented that in §298.330, TCEQ did not propose protection for pulse flows with return periods in excess of one year, other than for the Colorado River below Lake Travis because of the absence of site-specific studies supporting those specific pulse flow levels and frequencies. NWF and Sierra Club-Lone Star commented that SB 3 does not contemplate requiring new intensive site-specific studies and that a key concept of SB 3 is to make the best decisions possible based on currently available scientific information and then develop additional information and make appropriate adjustments in the future. On the one hand, TCEQ says it won't include protection for large pulses because then unappropriated water would be reduced and future projects that might seek to capture those pulses could not be permitted. On the other hand, TCEQ argues that there is no environmental harm associated with failing to include protection for such pulses because they will continue to occur. ES commented that it advocates for pulse flows, that using action state is too extreme, and that more water is taken from the environment to balance human needs. ES also commented that the stakeholders were charged with balancing the environment and human needs and that the stakeholders balanced ecological needs with protection of

property in making their recommendation. ES commented that if all surface water permits were used, there would be very little water left for environmental flows and what little water is left is generally related to pulse flows. ES commented that pulse flows are important because the science has shown us that these flows are essential to ecological function. TPWD commented that no information is presented in the rules to support the reduction in high flow pulse values from the BBASC recommended flows to the action state flows and that the reduced flows will not provide the same level of ecological benefit derived from higher flows. TPWD further commented that the process National Weather Service uses to determine action stage is not clear, but it appears to be based on non-ecological criteria and subjective information. CCA commented that the TCEQ would set the level of pulse triggers at the level where no harm has occurred, but the National Weather Service will notify the public to be prepared for potential flooding if the river continues to rise significantly beyond that level. CCA commented that TCEQ does not identify which or how many locations could flood, on which reaches of each of the rivers in question. CCA commented that TCEQ's departure from the stakeholder recommendation does not allow for bankfull events that do not in fact lead to floods, or for minor floods in certain reaches that benefit the riverine and estuarine environment while also avoiding any significant risk of harm to persons or property. TPWD recommended that the final rules use the high flow pulse values proposed by the BBASC as they will provide greater ecological benefit than the alternate values in the draft rules.

The commission respectfully disagrees with this comment. As it noted in the Section by Section Discussion of the proposed rulemaking, in many locations, flows at the flood stage could inundate low-lying areas and could therefore represent an event larger than the bankfull event. In addition, flows below the flood stage could also cause flooding. The commission reduced the trigger levels for some high flow pulses to the action stage level to ensure that the flows the commission is protecting in the adopted rule are not calculated to result in water flowing out of the banks of the river. The statute contemplates that environmental flow standards be developed using available science. The statute also requires that the commission adopt the standards into rule. The commission does not have precise information regarding specific areas that will or will not be inundated during bankfull or other high flow events. It relied on available information from the National Weather Service.

The commission respectfully disagrees that it must identify which or how many locations could flood in the basins affected by the adopted rules. However, the commission does note that the stakeholder recommendations were adjusted to address flooding concerns at the following USGS Gages: 08126380 - Colorado River near Ballinger, 08153500 - Pedernales River

near Johnson City, 08159200 - Colorado River at Bastrop, 08164000 - Lavaca River near Edna, 08164390 - Navidad River at Strane Park near Edna, 08164450 - Sandy Creek near Ganado, 08164504 - East Mustang Creek near Louise, 08164503 - West Mustang Creek near Ganado, 08164600 - Garcitas Creek near Inez, and 08162600 - Tres Palacios River near Midfield.

The commission also responds that with the exception of the lower Colorado River below Lake Travis, there was little site-specific or other scientific information supporting the specific higher pulse flow levels and frequencies recommended by the stakeholders. These high flow pulse levels and frequencies are based solely on a statistical representation of historic streamflows. The commission notes that further analyses and studies may need to be performed in the future to determine appropriate magnitudes, volumes and durations of these larger pulse events. SB 3 contemplates that these types of studies can be considered through adaptive management via the work plan. To the extent that additional information becomes available through monitoring and studies undertaken under the work plan, the science team could consider that information in future deliberations and recommend different flow values for consideration during future rulemaking. The commission agrees that any unappropriated water that is

available in this basin and bay system is available only during relatively wet conditions. Leaving some water available for new permits will not prevent these larger flood events from occurring. No change was made in response to this comment.

TPWD commented that the draft rules cite lack of site-specific information and hydrological modeling showing that much of the available unappropriated water includes these high flow pulses as reasons for eliminating them. However, no particular studies, analyses, or criteria are identified by the TCEQ to support its proposal, making it difficult to understand the basis for the changes to the stakeholder recommendations. Sites downstream of the Highland Lakes retain the larger high flow pulse levels made in recommendations based upon existing instream flow studies. These studies indicate the ecological importance of high flow pulse events with a return interval of greater than one year. Extrapolation of the downstream study results to areas upstream of the Highland Lakes and/or to the Lavaca River Basin indicate that the full suite of high flow pulses as recommended by the BBASC are appropriate.

The commission responds that it has made the WAMs used in its analysis available in its Web site. The commission further responds that the science team report includes descriptive information on the 20 locations recommended by the stakeholders and included in the adopted rule. Many

of these sites exhibit different characteristics than locations downstream from the Highland Lakes. HB 3/SB 3 is an adaptive management process. New studies and data can be developed via the work plan for this basin and bay system. To the extent that additional information becomes available through monitoring and studies as part of adaptive management, the science team and stakeholders could consider that information in future deliberations and recommend appropriate flow values for consideration during future rulemaking. The rule was not changed in response to this comment.

CCA commented that TCEQ concludes that "increasing pulse volumes and frequencies during wetter periods reduces the remaining unappropriated flow." CCA stated that TCEQ relies, apparently, on water availability modeling of unidentified "representative measurement points" by the ED. CCA further stated that TCEQ states in conclusory fashion that the ED "performed his own analysis to address the issue of balancing human and other competing needs for water in the basin," but the rule proposal contains no detailed description, no explanation, and no rational basis for that analysis or its conclusions. CCA commented that no interested person can comment meaningfully on a proposal that rests on such unidentified factual bases.

The balancing analysis performed by commission staff is detailed in the

preamble to this adopted rule. The statute requires the commission to adopt rules that will apply to the evaluation of applications for new appropriations of water. When applying the adopted standards in determining availability for applications for new appropriations of water, staff will use its WAMs. Therefore, when performing its balancing analysis, staff used these same WAMs. The WAM used for staff's balancing analysis is available on the TCEQ's public Web site on the Environmental Flows Rulemaking Web page. The model and the discussion of the model application in the Section by Section Discussion for §298.330 provide the rational basis for staff's conclusions.

LCRA, NWF and Sierra Club-Lone Star requested that the commission revise proposed §298.330(a)(2), concerning Threshold Volume Bay and Estuary Freshwater Inflow Standards for Matagorda Bay Inflows to include specific language protecting a minimum monthly inflow quantity of 15,000 acre-feet to Matagorda Bay as part of the environmental flow standards. LCRA commented that the proposed rule indicates that the monthly threshold volume is a strategy for freshwater inflow standards for Matagorda Bay and LCRA also commented that the stakeholders intended the monthly threshold volume to be applied to all future water right permits. NWF and Sierra Club-Lone Star comment that the stakeholders unanimously recommended that new permits and amendments to increase the amount of water stored, taken, or diverted from the

Colorado River Basin be subject to certain limits based on not further worsening attainment frequencies for certain inflow regimes, including not being allowed to divert during months that inflows from the Colorado River to Matagorda Bay were less than 15,000 acre-feet. NWF and Sierra Club-Lone Star requested that §298.330(a) be revised by including the following change: "(3) result in diversions during a month that a monthly inflow quantity of at least 15,000 acre-feet to Matagorda Bay from the Colorado River is not achieved." In addition, LCRA requests a conforming change to the definition of "Monthly strategy threshold inflow" in §298.305(13).

The commission agrees and in response to these comments the commission added new §298.330(a)(3) to include the monthly threshold requirement in the adopted rule and made conforming changes to the definition of "Monthly threshold inflow" in §298.305(13), to the figure located in §298.330(a)(2) and (b) and to the Section by Section Discussion for §298.330. The commission notes that it will apply this requirement as part of the water availability determination for new appropriations of water.

NWF and Sierra Club-Lone Star commented that generally the language of proposed §298.330(b) and (d) closely matches the stakeholders' recommendations. NWF and Sierra Club-Lone Star commented that the rule language could be read as indicating that improvements in inflows as a result of the implementation of strategies would only be

protected if those improvements actually fully meet the freshwater inflow standards rather than if they merely incrementally help to get closer to meeting those standards. These commenters requested that subsection (b) and (d) be revised to add the word "help" to clarify both of these subsections.

The commission agrees and §298.330(b) and (d) were modified to include this change.

NWF and Sierra Club-Lone Star commented that proposed §298.330(d) includes the term "inflow regime level" which does not appear in the figure located in §298.330(c) and no inflow regime levels are actually listed in the figure. NWF and Sierra Club-Lone Star requested that subsection (d) be revised to add the words "describe" and "frequency" and to delete the words "listed" and "level."

The commission agrees and §298.330(d) was modified to include this change.

TPWD commented that while most of the water in the Colorado River Basin is already appropriated, sufficient water exists in the Lavaca River Basin to provide an environmental set-aside. TPWD supports the stakeholder recommendation regarding set-asides. Even if the TCEQ ultimately decides against a set-aside, the rule package

should include a technical analysis of the availability of water for a set-aside and analysis of the impacts of a set-aside.

The commission responds that it determined that the remaining unappropriated water in the Lavaca Basin before application of the adopted standards was only available approximately 40% of the time, as described in the Section by Section Discussion for §298.330. TWC, §11.1471(a)(2), qualifies the requirement for a set-aside as "to the maximum extent reasonable when considering human water needs." In the Lavaca Basin, the commission has determined that set-asides are not reasonable because of water availability. Special conditions placed in a permit are a more effective method to protect flows in the stream when new appropriations of water are granted while providing water for future human needs. This is because if special conditions are used there are other sources of water in a stream that could be used to meet environmental flow requirements in a permit; for example, water appropriated to downstream water right holders, water appropriated to another but not used, or return flows. Additionally, set-asides require a water availability determination, and these sources would not be used to determine water availability because they would not be considered to be unappropriated water. The commission is only determining in this rule making to not establish set asides at this

time for the Lavaca Basin. After gaining further experience with implementation of environmental flows standards, as part of the adaptive management process, the commission is willing to revisit the issue. The rule was not changed in response to this comment.

§298.335, Water Right Permit Conditions

NWF and Sierra Club-Lone Star commented that although it may often work out that "flow restriction special conditions" would be adequate to ensure compliance with the environmental flow standards, there is no need to constrain the commission's discretion in this manner. NWF and Sierra Club-Lone Star commented that it simply is not possible now to predict precisely what types of permit applications the commission may be asked to consider in the future and the commission should retain flexibility to protect the flow standards using other types of permit conditions. These commenters requested that the commission remove the phrase "flow restriction" from §298.335(a) - (c).

The commission responds that the adopted flow standards in Chapter 298 will be included in permits for new appropriations of water as special conditions. Special conditions that protect environmental flow standards would be those special conditions that ensure compliance with the standards. The commission will implement these standards in each permit granted for a new appropriation of water. Applications for new

appropriations of water currently receive flow restrictions based on their location and facts provided in the application. Similarly, an application for a new appropriation of water under these rules will receive streamflow restrictions as provided by the adopted rules. The rule was not changed in response to this comment.

LCRA, NWF and Sierra Club-Lone Star commented that the proposed rules do not include the stakeholders' pulse flow implementations approach. LCRA commented that the stakeholders' recommended a tiered approach for the pulse flows in the lower Colorado River that tied the flows to diversion rates and storage volume and include cumulative impact provisions. LCRA commented that the proposed rule simplified this approach greatly, and in doing so, resulted in a loss of detail that was critically important to the BBASC consensus. LCRA requested that the commission revise proposed §298.335(b) to incorporate the specific proposals included in the stakeholder report. NWF and Sierra Club-Lone Star commented that if the commission includes additional levels of pulse flow protections, they would support inclusion in the flow standards of the stakeholders' pulse flow implementation approaches, which include cumulative impact provisions.

The commission agrees in part with the comment. The commission notes that the proposed rule included a number of the stakeholders' applicability

recommendations. In response to these comments, the commission included additional applicability requirements for the one per 18-month pulse flow and the one per two-year pulse flow for locations on the Colorado River below Lake Travis in the adopted rule because pulse flows at those recurrence intervals are included in the adopted standards. The commission adds new §298.335(c) and (d) to reflect these modifications. The commission respectfully disagrees that the stakeholders' recommended cumulative impact provisions are needed. These cumulative impact provisions would change the application of standards in future permitting once the commission begins to issue permits for new appropriations of water that are subject to the adopted rule. The commission did not include these provisions in the adopted rule in order to avoid an overly complicated rule. In addition, there is no need for these provisions because HB 3/SB 3 is an adaptive management process. Under SB 3's adaptive management provisions, further analyses and studies will be performed in the future to determine whether the adopted standards, once implemented, continue to protect the environment. Under HB 3/SB 3's adaptive management provisions, the stakeholders will have opportunities to re-evaluate the issue of balancing human and other competing needs for water in this bay and basin system at a time in the future when the stakeholders can include an assessment of the cumulative impacts of any new permits. When this re-

evaluation occurs, changed conditions can be addressed.

Subchapter E: Guadalupe, San Antonio, Mission, and Aransas Rivers, and Mission, Copano, Aransas, and San Antonio Bays General Comments

USFWS, Audubon, Bexar Audubon, GEAA, CARD, SMRF, HCA, ACCC, and eight individuals requested that the TCEQ adopt the recommendations of the stakeholder committee. One of these individuals commented that TCEQ should defer to a science based decision making process. CARD and an individual commented that the TCEQ must adopt rules that are no less protective than the stakeholder recommendations, which already included many compromises to balance human water supply needs with the environment. An individual commented that TCEQ should incorporate rules that more closely resemble the stakeholders' balanced considerations. USFWS commented that a science team and stakeholder group worked for over two years to get recommendations that generally balance water needs for the environmental and humans. USFWS requested that TCEQ adopt the stakeholder recommendations or something better and not step further away from environmental needs for the bay.

The commission respectfully disagrees that it had to adopt the stakeholder recommendations in their entirety because SB 3 clearly provides that the commission perform its own review of the stakeholders' recommendations. As provided in TWC, §11.02362(o), the stakeholders develop

recommendations, not final environmental flow standards, and send their recommendations to the commission. Under TWC, §11.1471, the commission is to adopt appropriate environmental flow standards "that are adequate to support a sound ecological environment, to the maximum extent reasonable considering other public interests and other relevant factors." The commission further responds the adopted standards are not based solely on scientific information. The commission followed its instructions in TWC, §11.1471, by balancing human and other competing needs for water with scientific recommendations. The commission also notes that it adopted many of the stakeholders' recommendations. No change has been made in response to this comment.

UGRA commented that they support the proposed rules. The Region J plan has identified the need to develop additional water supplies to meet future demands in the next 50 years.

The commission acknowledges the comment.

GRTU, HCA, and two individuals comment that TCEQ ignored the science when developing the rule. GRTU comments that the justification for deviation from the stakeholder recommendations is not well supported and that the analysis performed by

TCEQ is poorly documented and inferior to the analysis done by the BBEST (with guidance from the SAC) and BBASC. HCA and an individual commented that the proposed rules ignored hydrological and ecological conclusions and analyses provided by the science team. HCA commented that TCEQ has not provided adequate scientific justification for how the proposed rules protect a sound ecological environment. The decision to reject the best available science in this case risks sufficient flow in the Guadalupe River to meet all known needs. An individual commented that the stakeholder recommendations were guided by scientific principles and other then water quality there is not mention of any specific scientific principles that were used in developing the rule, TCEQ only addresses hydrologic considerations.

The commission did not disregard any science team recommendations, the SAC's review of those recommendations, or the stakeholder recommendations, but considered all of them. However, the commission respectfully disagrees that it had to adopt the stakeholder recommendations in their entirety because SB 3 clearly provides that the commission perform its own review of the stakeholders' recommendations. Under TWC, §11.1471, the commission is to adopt appropriate environmental flow standards "that are adequate to support a sound ecological environment, to the maximum extent reasonable considering other public interests and other relevant factors." The commission further

responds the adopted standards are not based solely on scientific information. The commission followed its instructions in TWC, §11.1471, by balancing human and other competing needs for water with the scientific recommendations. The commission provided information and explanations of the modeling, science, and balancing in the proposal preamble and also made this information available upon requests from interested parties. The commission also responds that the information used by the ED in performing his balancing analysis is available on the commission Web site. The commission does note that it has adopted many of the stakeholders' recommendations. The rule was not changed in response to this comment.

Audubon Texas commented that healthy bay systems are critical and the bases to any future success in stabilizing colonial water bird populations and other wildlife along the Texas coast. Audubon states the proposed TCEQ rules would not provide sufficient protection of water resources in the bays and estuaries and would work to undermine all other management efforts. Audubon expressed concern that stakeholders invested their time on the assumption that recommendations for stream flow would be honored by TCEQ, that TCEQ has no scientific basis in support of their proposed rules, and that TCEQ has failed to show that these rules will be adequate to protect a sound ecological environment in the bays and estuaries.

The commission first responds that it did not disregard any science team or stakeholder recommendations, but considered all of them. However, the commission respectfully disagrees that it had to adopt the recommendations in their entirety because SB 3 clearly provides that the commission perform its own review of the stakeholders' recommendations. As provided in TWC, §11.02362(o), the stakeholders develop recommendations, not final environmental flow standards, and send their recommendations to the commission. Under TWC, §11.1471, the commission is to adopt appropriate environmental flow standards "that are adequate to support a sound ecological environment, to the maximum extent reasonable considering other public interests and other relevant factors." In addition to reviewing the science team and stakeholder reports, the commission also performed water quality and water availability analyses of the adopted standards. The commission believes the adopted rules are protective of the environment because they include a flow regime consisting of subsistence flow, base flow, high flow pulses, and a freshwater inflow standard. The commission further responds that it is very aware of the dedication of time and money and the concern for maintaining healthy rivers and bays exhibited by the stakeholder committee. Neither the commission nor its staff takes this significant contribution lightly. The

commission adopted many of the stakeholders' recommendations. The rule was not changed in response to this comment.

Bexar Audubon, GEAA, GRTU, SMRF, CARD, and nine individuals commented that TCEQ disregarded the stakeholders' recommendations. Bexar Audubon commented that TCEQ's ruling negates the Legislature's 2007 flow process by disregarding several years work by the stakeholders. Bexar Audubon also commented that TCEQ sent a clear message to the citizens of Texas that they will not be heard and that their work is meaningless and can be set aside. GEAA commented that TCEQ disregarded the consensus agreement reached by the stakeholders and will undermine the efforts of stakeholders and the legislature to balance human water needs while protecting rivers and bays and the coastal economy. GEAA also commented that TCEQ rules give stakeholders a feeling that their efforts have been wasted and provide no incentive for future stakeholder participation. GRTU commented that it is concerned that the BBEST and BBASC work is not being given appropriate consideration and instead a less protective set of flow standards, than those recommended by the stakeholder committee, are being proposed for rule adoption. GRTU commented that TCEQ ignored the work of the BBEST and the recommendations of the BBASC, and violated the spirit of if not its directives in SB 3. CARD and an individual commented that TCEQ's rationale for weakening or ignoring the stakeholder recommendations is insufficient and lacks transparency to the public. One of these individuals commented that TCEQ's

proposed rule has major inconsistencies sides with the minority of the BBASC on the most important issue of environmental flows and that now that BBASC is working on the "work plan" it will become more discouraging unless the majority decisions are respected and followed by TCEQ. SMRF and two individuals commented that TCEQ should listen to this regional solution and learn from it and not just permit water rights, "the way we've always done them," as TCEQ staff told the stakeholders at a recent meeting. SMRF and three individuals commented on the amount of time and money spent and the hard work of the stakeholders in developing their recommendations. One of these individuals commented that TCEQ's proposed rules in the Guadalupe River Basin are contrary to the process outlined by the Governor's Environmental Flows Advisory Committee, authorized in 2005.

The commission did not disregard any science team or stakeholder recommendations, but considered all of them. However, the commission respectfully disagrees that it had to adopt the recommendations in their entirety because SB 3 clearly provides that the commission perform its own review of the stakeholders' recommendations. As provided in TWC, §11.02362(o), the stakeholders develop recommendations, not final environmental flow standards, and send their recommendations to the commission. Under TWC, §11.1471, the commission is to adopt appropriate environmental flow standards "that are adequate to support a sound

ecological environment, to the maximum extent reasonable considering other public interests and other relevant factors." The commission notes that it has adopted many of the stakeholders' recommendations.

The commission also responds that, at a meeting with the stakeholders prior to the proposed rule, staff noted that water availability for new permits is determined based on the commission's water availability models. The commission follows its instructions in the TWC and its rules in determining whether a permit for a new appropriation can be granted. The commission acknowledges the importance of transparency and has made efforts to be transparent in the process of developing the adopted rules. Staff provided detailed information and explanations of the modeling, science, and balancing, at two separate meetings with interested stakeholders, including the BBASC. These meetings were held after the proposal to discuss the information included in the preamble in order to assist these groups with developing comments on the proposed rule and to listen to their concerns. In addition to these meetings, staff also responded to a number of individual requests for information and explanation, including requests from members of the BBEST and the consultant for the BBASC committee after proposal in order to provide further assistance.

The commission further responds that, as staff stated numerous times at both of the technical meetings held with stakeholders and other interested parties, the commission is very aware of the dedication of time and money and the concern for maintaining healthy rivers and bays exhibited by the stakeholder committee. Neither the commission nor its staff takes this significant contribution lightly. The rule was not changed in response to this comment.

Cow Creek GCD and an individual commented on drought impacts. Cow Creek GCD commented that Texas saw the worst single-year drought in 2011 and that a repeat Drought of Record can only have devastating consequences for all concerns as the margins of error when accounting for surface water, and more importantly groundwater, availability within the entire Guadalupe River Basin have already been stretched beyond reasonable or sustainable limits.

The commission acknowledges the comment and responds that the purpose of this rulemaking is to establish environmental flow standards that will only apply to new appropriations of water and amendments that grant new appropriations of water after September 1, 2007. The commission notes that the adopted rules include subsistence flow levels that will limit diversions during extremely dry periods for permits to which this rule

applies. The rule was not changed in response to this comment.

GBRA commented that SB 3 established a specific process for the development of environmental flow standards, one that would ideally include a consensus recommendation from stakeholders and that such a consensus was not reached during the Guadalupe-San Antonio (GSA) stakeholder process. GBRA commented that out of 25 stakeholders, only the GBRA, City of New Braunfels, and the City of Victoria depend on water for current and future water supply, and that these entities rejected the majority recommendations of the stakeholder committee because these majority recommendations significantly impair future development of surface water supply in the Guadalupe River basin without a demonstrated commensurate environmental benefit.

The commission followed its instructions in TWC, §11.1471, to determine these flow standards. It considered all of the recommendations provided by the science team and the stakeholder groups and other relevant factors, including commission staff's water availability analyses, when drafting the adopted rules. The rule was not changed in response to this comment.

GBRA commented that the rule should also clarify that site-specific studies may represent a more accurate and better means of determining the environmental flows that are needed to support a sound ecological environment at a specific point in a basin.

GBRA commented that the rules should include language accepting the submittal of site-specific studies from applicants as an alternative to the proposed standards so that project specific issues can be considered during the permitting process for a given project.

The commission respectfully disagrees with this comment. TWC, §11.147(e-3) expressly states: "Notwithstanding Subsections (b) - (e), for the purpose of determining the environmental flow conditions necessary to maintain freshwater inflows to an affected bay and estuary system, existing instream uses and water quality of a stream or river, or fish and wildlife habitats, the commission shall apply any applicable environmental flow standard, including any environmental flow set aside, adopted under §11.1471 instead of considering the factors specified by those subsections." Subsections (b) - (e) are the statutes regulating how the commission protected the environment prior to HB 3/SB 3. It is clear that the bill and TWC, §11.147(e-3), meant for the commission to place any environmental flow standards determined under TWC, §11.1471, in a permit for new water instead of using these other statutes and site-specific data.

The commission agrees that site-specific studies may be an important part of the adaptive management of environmental flows. Site-specific studies

can be used by the science teams, stakeholders, and the commission when considering whether environmental standards in the rules should be revised according to the schedule in the adopted rule. The rule was not changed in response to this comment.

GBRA and Victoria commented that implementation of HB 3/SB 3 will be an evolutionary process. While this may be true, the commenters would submit that due consideration should be given to creating documents that clearly articulate how the ED will implement the rules in its water right permitting program. These commenters request that the ED develop some form of implementation procedures, for public review and comment, so that the regulated community has an opportunity to understand and contribute to how the ED will implement these rules, in more detail, once they are adopted.

The commission responds that staff is working on implementation and this document will be made available to the public when completed.

GSA BBASC members, ACCC, and three individuals commented on the differences in the stakeholder recommendations and models and the TCEQ's proposed rule and models. GSA BBASC members and an individual commented that the proposed rules released by TCEQ on March 9, 2012, included some of the GSA BBASC

recommendations but did not include others. GSA BBASC commented that the most significant changes were on the instream flow recommendations on the Guadalupe River and the freshwater inflow recommendations to the bays and estuaries. GSA BBASC expressed concerns with the rulemaking process and the degree of justification provided by the TCEQ staff for the proposed rules. The commenting GSA BBASC members want to know if the TCEQ had access to other information and what analysis they may have conducted to develop the proposed rules because the results of TCEQ's analysis resulted in different conclusions than the analysis performed by the GSA BBASC. GSA BBASC also comments that TCEQ staff did not provide explanation of the analysis or scientific justification for the proposed flow recommendations. GSA BBASC commented that TCEQ's response to their questions and concerns gave the impression to many BBASC members that their substantial personal dedication and involvement in this process was dismissed. GSA BBASC commented that this perception discourages the valuable participation of individuals in future stakeholder driven processes. GSA BBASC commented that TCEQ did not use the same models used by the GSA BBASC or GSA BBEST making an apples-to-apples comparison between the proposed rules and the GSA BBASC recommendations problematic. GSA BBASC commented that a more thorough explanation of the proposed rules and the associated TCEQ staff analysis would be beneficial. Two of these individuals commented that the computer model the TCEQ used should be compared to the model runs the stakeholders did and discussed openly.

The commission acknowledges the importance of transparency and has made efforts to be transparent in the process of developing the adopted rules. The commission also responds that it has been clear from the beginning of this process that it would use its water availability models that it uses in permitting to perform its balancing. The SAC, in its discussion paper *Moving from Instream Flow Matrix Development to Environmental Flow Standard Recommendations* also notes that water availability models modified through the Regional Planning process to reflect implementation of future projects may not include the same assumptions for existing water rights and prior appropriation as the models used by the commission in its water availability determination for new permits. The commission's understanding is that the stakeholders used a model that does not appropriately subtract from availability existing water rights valued at their full authorization and included return flows. Such an analysis would therefore overestimate the likelihood that a project could be permitted. Staff provided detailed information and explanations of the modeling, science, and balancing included in the preamble as well as a discussion of the differences in the models that were used by the stakeholders and TCEQ. This information was also presented at two separate meetings with interested stakeholders, including the BBASC. These meetings were held

after the proposal to discuss information included in the preamble in order to assist these groups with developing comments on the proposed rule and to list their concerns. In addition to these meetings, staff also responded to a number of individual requests for information and explanation, including requests from members of the BBEST and the consultant for the BBASC committee in order to provide further assistance.

The commission further responds that, as staff stated numerous times at both of the technical meetings held with stakeholders and other interested parties, the commission is very aware of the dedication of time and money and the concern for maintaining healthy rivers and bays exhibited by the stakeholder committee. Neither the commission nor its staff takes this significant contribution lightly. The rule was not changed in response to this comment.

GSA BBASC and ACCC commented that consistent with the open scientific review process outlined in SB 3, TCEQ should promote more understanding and dialogue throughout the rulemaking process. GSA BBASC comments that region by region discussion and agreement with TCEQ on the models, technical tools, assumptions, and data to be used should be reached prior to the work of the BBEST, BBASC and TCEQ staff. GSA BBASC requests that TCEQ coordinate a workshop with the BBEST and the

BBASC during its technical analysis phase to ensure understanding and interpretation of analysis presented in reports by the BBEST and BBASC to make the process much more transparent for stakeholders so they can understand the similarities and differences that may result from the TCEQ analysis.

The commission has followed the process provided in SB3/HB3. TCEQ staff was available to the stakeholders and science team and made presentations to both groups during the development of their recommendations. As noted before in this preamble, TCEQ staff also made multiple presentations to interested groups and individuals after this rule was proposed to discuss information included in the preamble in order to assist these groups with developing comments on the proposed rule and to listen to their concerns. Staff continues to be available to these groups. The commission welcomes the suggestions for process improvement and will carefully consider them.

GRTU, CARD, NWF and Sierra Club-Lone Star, GEAA, and an individual commented that the proposed rules are not adequate to support a sound ecological environment. GRTU commented that commission fails to provide a basis for the assertion that the proposed standards would be protective of a sound ecological environment. The sole reference to any analysis connected to the question of sound ecological environment is the reference in the proposed rules to a water quality analysis that the commission

purportedly conducted. CARD commented that the rules fall unreasonably short of providing the environmental protections that the rivers and bays need to remain healthy and economically productive. Adoption of this proposal will worsen existing challenges these waterways face by allowing additional water withdrawals at times when the rivers and wildlife that depend on them most need sufficient flows. GEAA commented that TCEQ's proposed rules do not provide adequate protections of rivers and bays and are not adequate to support the ecosystem that relies on instream flows. TCEQ failed to protect bays and estuaries and the birds and wildlife that rely on these habitats.

The commission responds that under TWC, §11.1471, the commission is to adopt appropriate environmental flow standards "that are adequate to support a sound ecological environment, to the maximum extent reasonable considering other public interests and other relevant factors." The commission adopted many of the stakeholders' recommendations. The commission further responds that the adopted standards are not based solely on scientific information. The commission followed its instructions in TWC, §11.1471, by balancing human and other competing needs for water with the scientific recommendations. The adopted rules are protective because they include a flow regime consisting of subsistence flow, base flow, high flow pulses, and a freshwater inflow standard. The numerical values for these flow regime components are based on the stakeholders'

recommendations. The commission also responds that the ED's water quality analysis was discussed in the preamble and has been available upon request. The rule was not changed in response to this comment.

An individual commented that the rule proposal will serve to maintain sound ecological environments within the river basins and associated estuary systems based on the results of quantitative environmental flow analyses. Results of these analyses indicate that flow variability, water quality, high flow pulse frequency, and freshwater inflows to San Antonio Bay will be maintained and aquatic habitat will be available in comparable and often greater quantities and frequencies after considering the project used in the balancing.

The commission acknowledges the comment.

GRTU commented that the proposed standards create significant risks to flow for the trout fishery and other recreational uses of the Guadalupe River downstream of Canyon Dam, as well as the ecology needed for fish and wildlife habitat. GRTU comments that TCEQ's justification and analysis of the proposed standard does not evaluate the impacts on the trout fishery or the economic value of that fishery and other recreational uses downstream of Canyon Dam.

Much of the flow for trout fishery downstream of Canyon Dam is provided by releases of permitted water from Canyon Dam. Existing water rights will not be affected by the adopted environmental flow standards. The pulses provided for in the adopted rules will also provide some protection for flow for the trout fishery and other downstream recreational uses. The commission balanced those interests in recreational use with other public interests in setting the final environmental flow standards. Recreation and wildlife needs are included in the streamflows protected by the adopted rule. No change has been made in response to this comment.

An individual commented that TCEQ staff explained in sufficient detail both their methodological approach and the analytical tools upon which the draft rules are based and that it is inaccurate and unfair to TCEQ and its employees to imply that they carried out their duties in an other than exemplary manner. The commenter noted that the GSA BBASC considered, and modeled, the impact of the simplified structure employed by TCEQ in the Trinity and Sabine bay and basins, producing results similar to those contained in the proposed rules. This analysis was the basis for GBRA's recommendations. The commenter states that GBRA asked that the simplified structure be included as a minority report, or be otherwise appended thereto and that this request was rejected by the majority of the stakeholders.

The commission acknowledges the comment.

ACND commented that the minimum inflows to San Antonio Bay recommended by the BBASC are not sufficient to sustain the health and ecological productivity of San Antonio Bay and surrounding bays, and that the TCEQ proposed rules for the Guadalupe River fall far short of even the BBASC recommendations for inflows to San Antonio Bay. ACND commented that in moving from the stakeholder recommendations to the proposed rule language, TCEQ staff did not include major aspects of the recommended protections, particularly for the Guadalupe River. ACND states that seasonally-significant flow protections required to sustain and improve the health of the bay and estuary systems were not included in the proposed rules. ACND requests that TCEQ honor the stakeholder recommendations in the BBASC report and improves on the weak BBASC recommendations regarding inflows to San Antonio Bay.

The commission responds that it followed its instructions in TWC, §11.1471, by balancing human and other competing needs for water with the scientific recommendations in developing the adopted rule. It considered all of the recommendations provided by the science team and the stakeholder groups and other relevant factors when drafting the adopted rules. Among the factors the commission considers are the impacts of the adopted standards on future permitting, and this determination is basin specific. Using the

stakeholder recommendations would not leave a water availability window for future permitting. The commission believes that the adopted rules are sufficiently protective of the environment because they include a flow regime consisting of subsistence flows, base flows, high pulse flows, and a freshwater inflow standard. Under SB 3's adaptive management provisions, further analyses and studies will be performed in the future to determine whether the adopted standards, once implemented, continue to protect the environment. No change has been made in response to this comment.

SARA commented that the continued health of the coastal economy is dependent upon the health of bay and estuarine ecosystems and it appears the TCEQ's draft standards only considered the human needs (water resource projects) of the more populous upper basin potentially to the detriment of the human needs of the coastal economy. SARA believes "human needs" has a broader definition than simply water resource projects because the economy of coastal communities is directly dependent on sustainable ecological conditions. SARA also comments that increased diversions of freshwater flows may have an impact on salinity and habitat and such impacts, if any, require more study to understand how they actually will affect marine life.

The commission acknowledges that healthy bay systems are important for

economic and ecological reasons. The commission included freshwater inflow standards in the adopted rule for the protection of bays and estuaries. The commission also responds that TWC, §11.1471, requires the commission to consider "the human and other competing water needs in the basin and bay system." Humans obtain water for their needs by obtaining appropriations of water or taking water for exempt purposes. Human needs for recreation and wildlife enjoyment are included in the streamflows protected by the adopted rule. The commission notes that the stakeholders included an economic analysis in their report, and this report was considered by the commission in drafting the adopted rules. Under SB 3's adaptive management provisions, further analyses and studies will be performed in the future to determine whether the adopted standards, once implemented, continue to protect the environment. No change was made in response to this comment.

ICF commented that by reducing the BBEST and BBASC flow recommendations on the Guadalupe River, which has historically provided a majority of flows into the San Antonio Bay System, a basin-wide approach has not been maintained.

The commission respectfully disagrees with this comment and responds that it did not disregard any science team or stakeholder recommendations,

but considered all of them. Under TWC, §11.1471, the commission is to adopt appropriate environmental flow standards "that are adequate to support a sound ecological environment, to the maximum extent reasonable considering other public interests and other relevant factors." The commission adopted many of the stakeholders' recommendations. The commission did not adopt all of the BBASC recommendations in an effort to achieve what it considers to be the appropriate balance between environmental interests and other public interests and relevant factors. An explanation of the commission's analysis regarding preserving some unappropriated flows for future human needs is set out in more detail elsewhere in this preamble.

ICF commented that eliminating the environmental set-asides recommended by BBBASC subjugates the conciliatory efforts to create incentives and promote involvement of water users to remediate the water shortages.

The commission respectfully disagrees. The commission appreciates the work of the BBEST and BBASC to develop flow recommendations. However, under TWC, §11.1471(a)(2), the requirement for a set-aside is qualified by the clause "to the maximum extent reasonable when considering human water needs." In the Guadalupe/San Antonio basin, the

commission has determined that set-asides are not reasonable because of limited water availability. Special conditions placed in a permit are a more effective method to protect flows in the stream when new appropriations of water are granted while providing water for future human needs. This is because if special conditions are used there are other sources of water in a stream that could be used to meet environmental flow requirements in a permit; for example, water appropriated to downstream water right holders, water appropriated to another but not used, or return flows. The rule was not changed in response to this comment.

USFWS, ICF, and an individual commented regarding the federally endangered whooping crane. ICF and an individual commented that what other basins do not have to consider is the responsibility of recovery of the federally endangered Whooping Crane. Freshwater inflow management is important to blue crab abundance, and Whooping Crane mortalities. Correlations between freshwater inflows and blue crab abundance and between blue crab abundance and Whooping Crane mortalities have been established. Allowing more river flow to reach whooping crane critical habitat would reduce harm to the whooping crane population. USFWS commented that they are concerned about outcomes of environmental flows for the rivers and bays because they sustain the ecosystem for the federally endangered whooping crane and its designated critical habitat. USFWS also commented that the crane's survival factors,

diet of blue crabs, fresh water to drink and proper habitat configuration may be impacted by river flow regimes.

In developing the adopted rule, the commission considered among other documents, the report of the GSA BBEST. In its extensive review of the scientific literature, the BBEST considered the articles referenced by ICF as well as many other studies. Under the state environmental flow process, as set out in TWC, §11.1471, the commission must adopt environmental flow standards that are "adequate to support a sound ecological environment to the maximum extent reasonable considering other public interests and other relevant factors." The commission is adopting standards today with the appropriate balance between those interests. The commission notes that in its standards for the Guadalupe/San Antonio Bay system, it is adopting freshwater inflow standards designed to protect the bay. The commission declines to make any specific changes as a result of this comment. However, some changes made in this final rule may provide additional freshwater inflow to the bay over and above what was contained in the proposed rule.

An individual requested that the commission withdraw the proposal then re-propose once the agency has considered the question of how much water San Antonio Bay needs.

The individual commented that the commission used the "lowest flow numbers in the BBASC report," the subsistence flow at the Victoria and Goliad gages, and assumed that this subsistence flow needed to sustain the river ecosystem was sufficient to sustain the estuary and San Antonio Bay. The individual further commented that the proposed rule implicitly assumes that water passing the Victoria and Goliad gages actually reaches the bay. This assumption ignores the presence of the Guadalupe River diversion Dam and Salt Water Barrier, an inflatable dam capable of impounding 600 acre-feet of water and diverting it to water users in the lower basin below the gages.

The commission respectfully disagrees with this comment. The adopted rule includes subsistence flows, base flows, and high flow pulses. SB 3 provided a process to develop environmental flow standards for use in water rights permitting for new appropriations of water. The Guadalupe River diversion Dam and Salt Water Barrier are authorized under existing certificates of adjudication and these authorizations are not subject to the adopted standards. The science team for this basin and bay system developed a recommended environmental flow regime, or schedule of flow quantities adequate to support a sound ecological environment. The stakeholders for this basin took the science team's recommendations and considered those recommendations in conjunction with other factors, including the present and future needs for water for other uses. The

commission then followed its instructions in TWC, §11.1471, to determine these flow standards. It considered all of the recommendations provided by the science team and the stakeholder groups and other relevant factors, including commission staff's water availability analyses, when drafting the adopted rules. Therefore, the adopted standards are not based solely on scientific information. The commission followed its instructions in TWC, §11.1471, by balancing human and other competing needs for water with the scientific recommendations. Under SB 3's adaptive management provisions, further analyses and studies will be performed in the future to refine and validate the adopted standards. No change has been made in response to this comment.

An individual commented that the proposed TCEQ water allocation for the Guadalupe and San Antonio Rivers that flow into San Antonio Bay is inadequate and will result in a "take" of whooping cranes under the Endangered Species Act. In order to comply with the Endangered Species Act, the TCEQ needs to write a Habitat Conservation Plan that will protect the whooping crane flock and needs to obtain a "take" permit from the USFWS for management of the Guadalupe and San Antonio rivers.

The commission notes that the TCEQ's actions relative to the administration of water rights on the Guadalupe and San Antonio Rivers

and its effect on the whooping cranes is the subject of a lawsuit pending at the present time in federal court. The TCEQ's position in that lawsuit is that no "take" has occurred and that it is not liable under the Endangered Species Act. The commission declines to comment further on that pending litigation.

NWF and Sierra Club-Lone Star commented that the Guadalupe-San Antonio BBEST report illustrates that with the full utilization of existing water rights, inflows to San Antonio Bay will not meet the inflow criteria recommended to maintain a sound ecological environment.

The commission responds that it included freshwater inflow standards in the adopted rule for the protection of bays and estuaries. The commission also notes that these rules are intended to apply to new appropriations of water. The commission's finding of a sound ecological environment is in keeping with the science team finding. The science team's finding and that of the commission reference the conditions that exist today. HB 3/SB 3 is an adaptive management process. As such, the determination of whether a sound ecological environment exists at some future date is a topic that can be considered by future science team and stakeholder groups when considering recommendations for revisions to the adopted rules. No

change has been made in response to this comment.

One individual commented that the stretches below Victoria on the Guadalupe and especially below Goliad on the San Antonio are somewhat neglected in general because flows in those stretches are often extrapolated using upstream data. The commenter stated that effects of the riparian areas on flows as well as the effect of flows on those areas deserve greater consideration.

The commission responds that HB 3/SB 3 added TWC, §11.02362(p), which recognized the importance of adaptive management and provided that after submitting its recommendations regarding environmental flow standards and strategies to meet the environmental flow standards to the commission, each stakeholder committee prepare and submit a work plan. The work plan is to establish a periodic review of the basin and bay environmental flow analyses and environmental flow regime recommendations, environmental flow standards, and strategies, prescribe specific monitoring, studies, and activities; and establish a schedule for continuing the validation or refinement of the basin and bay environmental flow analyses and environmental flow regime recommendations, the environmental flow standards adopted by the commission, and the strategies to achieve those standards. Issues related to flows in these

reaches and the interaction with riparian areas can be considered by the stakeholders in their development of a work plan. The rule was not changed in response to this comment.

One individual commented that the work plan and adaptive management process established by SB 3 that is presently being developed by the stakeholders allows the opportunity to monitor the effectiveness of the instream criteria in maintaining the ecological soundness of San Antonio Bay and allows continued consideration of the necessary components of the freshwater inflow regime and their associated frequencies of occurrence.

The commission acknowledges the comment.

ICF commented that the stakeholder recommendations were conservative, and that given more information, the amount and timing of environmental flows to maintain a sound ecological environment would be increased.

The commission acknowledges that further analyses and studies may need to be performed in the future to determine whether the adopted standards, once implemented, are protective. HB 3/SB 3 contemplate that this data and new studies can be considered through adaptive management via the

work plan for this basin and bay system. To the extent that additional information becomes available through monitoring and studies undertaken under the work plan, the science team could consider that information in future deliberations. The rule was not changed in response to this comment.

An individual commented that it is not true that the bays and estuaries will be imperiled by the adoption of these rules. The environmental community should be satisfied and recognize that about 90% of the recommendations were adopted. The individual also commented that it's also irresponsible to place the entire burden for meeting future needs on groundwater. The risk of overbalancing for the environment is not to protect the environment, but rather it is when a crisis of an emergency arises to throw out the environmental protections that TCEQ's rules suitably modified.

The commission acknowledges the comment.

An individual requested that TCEQ also consider approving further study of the impact of Groundwater Management Area 9's proposed 30' Desired Future Condition or drawdown of the Trinity Aquifer. This decline will cause decreased spring fl0ws in the Guadalupe River Basin and has not been calculated in the current modeling. The TCEQ should consider rules that address the groundwater surface water interface and the

decreased spring flows that will result from drawing down the Trinity Aquifer an additional 30 feet. The groundwater study should be fully funded and included in the work plan for the Guadalupe River Environmental Flows Team.

The commission acknowledges the comment and responds that the adopted rule applies to environmental flow standards for new applications to store, divert, or take state surface water. HB 3/SB 3 also added TWC, §11.02362(p), which recognized the importance of adaptive management and provided that after submitting its recommendations regarding environmental flow standards and strategies to meet the environmental flow standards to the commission, each stakeholder committee prepare and submit a work plan. The work plan is to establish a periodic review of the basin and bay environmental flow analyses and environmental flow regime recommendations, environmental flow standards, and strategies, prescribe specific monitoring, studies, and activities; and, establish a schedule for continuing the validation or refinement of the basin and bay environmental flow analyses and environmental flow regime recommendations, the environmental flow standards adopted by the commission, and the strategies to achieve those standards. Issues related to groundwater surface water interaction can be considered by the stakeholders in their development of a work plan. The rule was not changed in response to this

comment.

§298.355, Definitions

NWF and Sierra Club-Lone Star commented that the definition of "Average condition" should reflect that the 50% of time being referred is intended to refer to times that are neither dry nor wet. The commenters requested that §298.355(1) be revised to include the phrase, "and that is intended to represent periods that are neither wet nor dry."

The commission agrees and §298.355(1) has been changed in response to this comment.

NWF and Sierra Club-Lone Star commented that the definition of "Dry condition" should reflect that the 25% of time being referenced is intended to represent times that are dry, not just any 25% of time. The commenters requested that §298.355(2) be revised to include the phrase, "and that is intended to represent the driest periods."

The commission agrees and §298.355(2) has been changed in response to this comment.

NWF and Sierra Club-Lone Star commented that because the term "spring" is used to refer to a different time period for instream flow standards than for freshwater inflow

standards, the applicability of the definition should be limited to the instream flow measurement points. The commenters requested that §298.355(6) be revised to include the phrase, "for the measurement points listed in §298.330(c)."

The commission agrees and §298.355(6) has been changed in response to this comment.

NWF and Sierra Club-Lone Star commented that because the term "summer" is used to refer to a different time period for instream flow standards than for freshwater inflow standards, the applicability of the definition should be limited to the instream flow measurement points. The commenters requested that §298.355(9) be revised to include the phrase, "for the measurement points listed in §298.330(c)."

The commission agrees and §298.355(9) has been changed in response to this comment.

NWF and Sierra Club-Lone Star commented that the definition of "Wet condition" should reflect that the 25% of time being referenced is intended to represent times that are wet, not just any 25% of time. The commenters requested that §298.355(10) be revised to include the phrase, "and that is intended to represent the wettest periods."

The commission agrees and existing §298.355(10) has been changed in response to this comment.

NWF and Sierra Club-Lone Star request that the commission add a definition for "Time-period." The term "time-period" is used in describing certain short-duration high flow pulses at four specific measurement points. Those time-periods do not conform to the seasons used in defining other pulses. Because occurrence frequency for those pulses is defined by time-period rather than a particular season, a defined term is needed to help describe how pulse flow compliance for those pulses will be determined. "Time-period--for certain measurement points in the San Antonio River Basin. The period of time specifically listed in the column labeled "time-period" in Figures: 30 TAC §§298.380(c)(12)(B), (13)(B), (14)(B), and (15)(B). Each time-period listed in those figures is considered independently in assessing high flow pulse requirements even if there are overlapping months."

The commission agrees that a definition of time period would clarify the adopted rules. A new §298.355(10) was added in response to this comment. The commission also agrees that the adopted rule should specify application of these time periods. Adopted §298.375(d)(4) has been modified in response to this comment.

§298.360, Findings

SARA commented that TCEQ stated in the draft standards that, "the Guadalupe, San Antonio, Mission, and Aransas Rivers and their associated tributaries, Mission, Copano, Aransas, and San Antonio Bays, and the associated estuaries are substantially sound ecological environments." The GSA BBEST finding was based upon current levels of return flows and water rights permit usage and they further qualified their finding of "soundness" by noting: By sound we mean that the measures of the status of native communities and habitats have been generally good and that no obvious long-term losses of function or undue impairment of important biologic, physical, or chemical processes are evident. Exceptions include communities and habitats directly affected by anthropogenic modifications in localized areas (i.e., within and immediately downstream of reservoirs or highly urbanized areas). It is important to note the GSA BBEST did not say that flows resulting from full permitted use of water will result in a sound ecological environment. Rough estimates depending on base flow levels suggest that approximately 40% - 45% of the permitted water in the basin is actually diverted / used today. As the region's population grows, that usage rate of currently permitted water is projected to increase. Regarding the bays and estuaries the GSA BBEST utilized "several lines of evidence" available to them in addition to professional judgment to determine "that a sound ecological environment has existed and currently exists in the Guadalupe and Mission - Aransas Estuaries." What science, if any, did the TCEQ rely on to determine that its recommended inflow standards would maintain a sound ecological

environment within the bay and estuary under the full usage of existing water rights?

The commission responds that it did not find that its recommended inflow standards would maintain a sound ecological environment under full usage of existing water rights. The commission also responds that its finding of a sound ecological environment is in keeping with the science team finding. The science team's finding and that of the commission reference the conditions that exist today, under current water use conditions. HB 3/SB 3 is an adaptive management process. As such, the determination of whether a sound ecological environment exists at some future date is a topic that can be considered by future science team and stakeholder groups when considering recommendations for revisions to the adopted rules. No changes were made in response to this comment.

NWF and Sierra Club-Lone Star commented that year-to-year variation in flows as a result of changes in rainfall is not an adequate mechanism for protecting a flow regime and a sound ecological environment. The proposed rules do not incorporate multiple levels of base flows for locations in the Guadalupe Basin and, accordingly, do not provide for reasonable levels of year-to-year variations. A single base flow level, as is proposed for the Guadalupe River locations, is not sufficient to meet the statutory standard of protecting a sound ecological environment to the maximum extent

reasonable considering other relevant interests. It does not account for fluctuations in flow levels based on year-to-year changes reflecting wet and dry conditions. SB 3 directs the development of an environmental flow regime, which "means a schedule of flow quantities that reflects seasonal and yearly fluctuations that typically would vary geographically, by specific location in a watershed, and that are shown to be adequate to support a sound ecological environment and to maintain the productivity, extent, and persistence of key aquatic habitats in and along the affected water bodies." Thus, yearly fluctuations are intended to be incorporated in order to protect a sound ecological environment. The commenters requested that §298.360(b) be revised to include references to multiple levels of base flows, multiple levels of high flow pulses, overbank flows and hydrologic conditions.

The commission respectfully disagrees that multiple levels of base flows with hydrologic conditions are the only method that can achieve flow variability. The commission responds that although the adopted rules for the Guadalupe River Basin do include a single base flow standard, flow variability would be maintained by only allowing water right permits subject to the adopted rules to divert 50% of the flow between subsistence and wet base flow. In addition, the commission included flow standards for high flow pulses in the adopted rule and high flow pulses vary seasonally and annually. Therefore, the amount of water a water right subject to this

subchapter could divert would vary depending on rainfall. Rainfall varies seasonally and annually. Therefore, once the standards are implemented in a water right permit, the remaining flows after diversion would vary by season and by year, depending on rainfall. The commission further responds that the adopted standards are protective of the environment because they include a flow regime of subsistence flow, base flow, and high flow pulses. The numerical values for these flow components are based on the stakeholders' recommendations. Subsistence flows, base flows, and high flow pulses are components of a flow regime for a sound ecological environment and this is reflected in the adopted rule. Therefore, the requested revision to §298.360(b) is not necessary and the rule was not changed in response to this comment.

NWF and Sierra Club-Lone Star commented that the provision related to sound ecological environment in the bays and estuaries should acknowledge the importance of targets for implementation of strategies to increase inflows above levels expected with full exercise of existing water rights. The commenters recommend the following revisions to §298.360(c): "(c) For Mission, Copano, Aransas, and San Antonio Bays, the commission finds that the sound ecological environment of these bays can best be maintained by a set of freshwater inflow standards that include freshwater inflow quantities that vary by season and from year to year for certain selected seasons and that

rely on quantities of flow protected by instream flow standards consisting of subsistence flows, three levels of base flows, and multiple levels of high flow pulse flows during the remaining seasons. The commission also finds that the freshwater inflow standards should incorporate targets for implementing strategies to increase inflow regime level achievement above the frequencies expected with full exercise of existing water rights."

The commission agrees, in part, and §298.360(c) has been modified to reflect this comment. However, with respect to adding a provision related to future conditions, the commission notes that its finding of a sound ecological environment is in keeping with the science team finding. The science team's finding and that of the commission reference the conditions that exist today. HB 3/SB 3 is an adaptive management process. As such, the determination of whether a sound ecological environment exists at some future date is a topic that can be considered by future science team and stakeholder groups when considering recommendations for revisions to the adopted rules.

§298.370, Calculation of Hydrologic Conditions

NWF and Sierra Club-Lone Star commented that they support, consistent with the recommendation of the GSA BBASC, creating a mechanism to have a preliminary assessment of hydrologic condition(s) throughout the river basin posted for the

upcoming season (five) days in advance of the first day of the season to allow for operational planning and adjustments. The commenters also recommended that §298.370(a) - (c) be revised to include hydrologic conditions for measurement points in the Guadalupe River Basin.

The commission responds that based on balancing human and other competing needs for water it does not adopt multiple levels of base flow for measurement points on the Guadalupe River. Therefore, hydrologic conditions are not necessary for these measurement points. In addition, the commission respectfully disagrees that hydrologic conditions are the only method that can achieve flow variability. Flow variability will be maintained for measurement point in the Guadalupe River Basin because water right permits subject to the adopted rules can only divert 50% of the flow between subsistence and wet base flow. With respect to implementation of hydrologic conditions in permits that are subject to this rule, and to which hydrologic conditions are applicable, including posting these conditions prior to the start of the season, the commission sees implementation of HB 3/SB 3 as an evolutionary process. The commission wishes to maintain flexibility in permit special conditions as it gains experience implementing the environmental flow standards. No change has been made in response to this comment.

§298.375, Schedule of Flow Quantities

An individual commented that in the Guadalupe Basin, we're fortunate to have more science, and given present planning in this basin, that science has been shown to support the use of a simpler flow regime with a single level of subsistence, a single level of base and a single level of pulse flows consistent with the simple regime proposed by the TCEQ staff, and the simpler regime supported by GBRA. The work of the stakeholders' technical consultants demonstrates that a simplified framework for instream criteria is protective of the San Antonio Bay system, as the simplified framework yields almost exactly the freshwater inflow regime as the full stakeholder recommendations.

The commission acknowledges the comment.

GBRA commented that they support the ED's proposed framework for instream flow standards for the Guadalupe River Basin, specifying a flow regime framework comprised of individual levels of seasonal subsistence, base, and pulse criteria, as it has been demonstrated during the stakeholder process that such flows maintain a sound ecological environment while having a less significant impact on future development of water supply.

The commission agrees and acknowledges the comment.

UGRA commented that a simplified instream flow regime of one tier of subsistence flows, one tier of base flows, and one tier of pulse flows is sufficient to provide and protect a sound ecological environment in the Guadalupe River Basin.

The commission agrees that the instream flow regime in the adopted rule is protective because it includes a flow regime consisting of subsistence flows, base flows, high flow pulses, and a freshwater inflow standard.

ICF and two individuals expressed concerns that the proposed rule does not include overbank flows. ICF commented that by not including any overbank flows in the rules, TCEQ inhibits efforts to maintain hydrologic balance and support and removes all environmental considerations. One of these individuals commented that leaving out overbank or flushing flows is also disturbing even though TCEQ considers them to be a component of a flow regime for a sound ecological environment. The commenter stated that high flow pulses are important for delivering sediments and nutrients to the bays. These components are shown to be needed for a sound ecological environment by the National Academy of Sciences and the San Antonio River SB 2 studies. One of these individuals commented that TCEQ relied on a broad concept that overbank flows result from large rainfall events and a more proactive approach is needed. Sediment transfers

are better affected by surges and large influxes of freshwater, have benefits, and deserve specific protections.

The commission acknowledges that overbank flows and flushing flows are a component of a flow regime for a sound ecological environment. However, these flows have the potential to inundate low-lying areas. The flows the commission is protecting in the adopted rule are not calculated to result in water flowing out of the banks of the river. As noted elsewhere in this preamble, overbank flows are the result of naturally occurring large rainfall events which will likely continue to occur. The rule was not changed in response to this comment.

CARD and three individuals commented that high flow pulses are needed for the environment. CARD and one individual commented that the stakeholders met for over two years and submitted significant scientific evidence that rivers and bays require high flow pulses to be sustainable. Two individuals commented that the diverse stakeholders of this region agreed on protecting a certain amount of high flows that come during very wet periods, and these recommendations were left out of TCEQ's proposed rules. Rivers and bays need some high flow pulses, and TCEQ is ignoring this need, as well as the very basic need to protect bays from being cut off from all river flows during dry times.

The commission acknowledges that high flow pulses are a component of a flow regime for a sound ecological environment. The commission also acknowledges that healthy bays are important. The adopted rules include both high flow pulses and a freshwater inflow standard. The commission believes that the adopted rules are protective because they include these flow components as well as subsistence flows and base flows. The rule was not changed in response to this comment.

Victoria commented that it also supports TCEQ's use of a single level of seasonal base flow. Studies done for the GSA BBASC show that additional levels of base flow are not needed. TCEQ has proposed that the wet base flows from the Hydrology-Based Environmental Flow Regime (HEFR) analysis be used for the spring and summer season base flows. Victoria believes that the environmental flow analyses performed for the stakeholder committee show that the dry base flows from the HEFR analysis for spring and summer are equally, if not more protective and would allow a little more water for water supply.

The commission responds that based on information in the science team report and additional scientific information developed by the stakeholders, it appears that a flow regime consisting of only a dry base flow and a subsistence flow would be less protective. The commission acknowledges

that more water could be diverted if the environmental flow standards are lower. However, the commission's balancing analysis demonstrates that the standards in the adopted rule also allow for some water to be available for future permits. The rule was not changed in response to this comment.

Three individuals commented on using one level of base flows for measurement points on the Guadalupe River. One of these individuals commented that the environmental flows recommended by the BBASC consider seasonal variations as well as dry, average, and wet hydrologic cycles, the TCEQ proposed rule is inconsistent in this regard. This approach does not provide protections in line with what naturally occurs and the rule makes more water available for diversion by new water rights applicants at the expense of the environment. One of these individuals commented that the instream flow study on the San Antonio helped the stakeholders realize the advisability of three tiers of base flow. This is more complex than TCEQ's rules and should be included in future permits. One of these individuals commented that three tiers of base flows are needed to recognize conditions of dry, average, and wet. The most significant and damaging changes in TCEQ's rules were made on instream flow recommendations on the Guadalupe River.

The commission considered all of the recommendations provided by the science team and the stakeholder groups and other relevant factors,

including the commission's water availability analyses, when drafting the adopted rules. The adopted standards are not based solely on scientific information. The commission followed its instructions in TWC, §11.1471, by balancing human and other competing needs for water with scientific recommendations. The commission further responds that the adopted rules are protective of the environment because they include a flow regime consisting of subsistence flows, base flows, high flow pulses, and a freshwater inflow standard. Adopted §298.375(b) prohibits a permit that is subject to the adopted rules from diverting more than 50% of the difference between the applicable subsistence flow and the applicable base flow requirement. This provision will maintain variability in streamflows. No change has been made in response to this comment.

SARA commented that the best available science derived from the GSA BBEST, Dr. Hardy's continuing work in support of the GSA BBASC deliberations, and the SB 2 study on the San Antonio River all suggested multiple tiers of base flows are necessary to maintain the soundness of the ecological environment. What science or research relied upon by TCEQ suggested a single tier of base flow would maintain the presently found sound ecological environment? SARA recommended that until an SB 2 study is completed on the Guadalupe River, and the results of such study suggest otherwise, the TCEQ should adopt the GSA BBASC recommendations as presented and then if more

scientific information becomes available that supports that a single-tiered base flow is not harmful to maintaining a diverse riverine ecosystem, then the flow recommendations can be modified.

The commission responds that although the adopted rules do include a single base flow standard, flow variability would be maintained by only allowing water right permits subject to the adopted rules to divert 50% of the flow between subsistence and wet base flow. Therefore, once the standards are implemented in a water right permit, the remaining flows after diversion would be variable. Using multiple levels of base flow and hydrologic conditions to maintain flow variability would likely have the effect of allowing a water right holder subject to the standards to divert all of the remaining water in the river down to the standard. This would likely result in less flow variability. The commission also responds that the adopted standards are not based solely on scientific information. The commission followed its instructions in TWC, §11.1471, by balancing human and other competing needs for water with the scientific recommendations. Staff provided information and explanations of the modeling, science, and balancing in the proposal preamble and also made this information available upon requests from interested parties. The commission also responds that the information used by the ED in performing his balancing

analysis is available on the commission Web site.

The commission has adopted many of the stakeholders' recommendations. The commission believes that the adopted rules are sufficiently protective of the environment because they include a flow regime consisting of subsistence flows, base flows, high flow pulses, and a freshwater inflow standard. Under SB 3's adaptive management provisions, further analyses and studies will be performed in the future to determine whether the adopted standards, once implemented, continue to protect the environment. No change has been made in response to this comment.

HCA and GEAA commented that science shows that in order to maintain a sound ecological environment, rivers require multiple tiers of baseflows, high flow pulses, and overbank flows. Both the BBEST and BBASC recommendations called for protection of these flows. However, TCEQ proposed rules have eliminated the multi-tiered baseflows, several of the high flow pulses, and all overbank flows. TCEQ has not provided adequate justification for how their proposed rules will protect a sound ecological environment.

The commission agrees that flow variability is important. The adopted rules for both basin and bay systems include provisions that ensure flow variability. The commission also acknowledges that overbank flows are a

component of a flow regime for a sound ecological environment. However, these flows have the potential to inundate low-lying areas. The flows the commission is protecting in the adopted rule are not calculated to result in water flowing out of the banks of the river. As noted elsewhere in this preamble, overbank flows are the result of naturally occurring large rainfall events which will likely continue to occur. The commission also responds that it did not disregard the science team recommendations, the SAC's review of those recommendations, or the stakeholder recommendations, but considered all of them. Under TWC, §11.1471, the commission is to adopt appropriate environmental flow standards "that are adequate to support a sound ecological environment, to the maximum extent reasonable considering other public interests and other relevant factors." The rule was not changed in response to this comment.

NWF and Sierra Club-Lone Star commented that the rationale in the proposed rule for reducing protections from three levels of base flows to one level of base flow in the Guadalupe River Basin is insufficient. The BBEST report notes, a single base-flow regime could result in the complete loss of a specific component of the aquatic community because there is no longer the necessary variability.

The commission responds that although the adopted rules do include a

single base flow standard, flow variability would be maintained by only allowing water right permits subject to the rules to divert 50% of the flow between subsistence and wet base flow. Therefore, once the standards are implemented in a water right permit, the remaining flows after diversion would be variable. Using multiple levels of base flow and hydrologic conditions to maintain flow variability would likely have the effect of allowing a water right holder subject to the standards to divert all of the remaining water in the river down to the standard. This would likely result in less flow variability. The rule was not changed in response to this comment.

NWF and Sierra Club-Lone Star commented that the proposed rule removes critical bay and estuary protection for the fall and winter seasons by not including three tiers of base flows on the Guadalupe River and by not protecting high flow pulses and overbank pulses for the whole basin. There is inadequate justification in the rule for dropping these critical pieces from the flow regimes recommended by stakeholders.

The commission acknowledges that overbank flows are a component of a flow regime for a sound ecological environment. However, these flows have the potential to inundate low-lying areas. The flows the commission is protecting in the adopted rule are not calculated to result in water flowing

out of the banks of the river. As noted elsewhere in this preamble, overbank flows are the result of naturally occurring large rainfall events which will likely continue to occur. The commission agrees that healthy bay systems are important. The commission included freshwater inflow standards in the adopted rule for the protection of bays and estuaries. In response to other comments, the commission modified §298.380(a) to clarify application of the freshwater inflow standards for use in water availability determinations for new water rights or amendments subject to this subchapter. The commission followed its instructions in TWC, §11.1471, to determine these flow standards. It considered all of the recommendations provided by the basin science team and the basin stakeholder group and other relevant factors, including commission staff's water availability analyses, comments on the proposed rule and basin specific information when drafting the adopted rules. The rule was not changed in response to this comment.

GBRA commented that they can support the adoption of the 50% Rule in the Guadalupe River Basin as specified in §298.375(b). Analyses for the GSA BBASC and by TCEQ and GBRA have demonstrated that the 50% Rule helps to ensure base flow variability while limiting unnecessary impacts on water supply and operational complexity associated with three tiers of base flow.

The commission agrees and acknowledges the comment.

Victoria commented that it supports the subsistence flow implementation rule found in proposed §298.375(b) and the high flow pulses implementation rule found in proposed §298.385(b). It is Victoria's understanding that these implementation methods were adopted unchanged from the GSA BBASC report.

The commission acknowledges the comment but notes that although the 50% rule in the adopted Subchapter E does provide a limitation on diversions between the adopted base and subsistence flow standards, the stakeholders recommendation applied the 50% rule only to diversions between subsistence flow and dry base flow. The rule was not changed in response to this comment.

GBRA commented that they support the adoption of the Pulse Exemption Rule as specified in §298.385(b). Analyses for the GSA BBASC and by TCEQ and GBRA have demonstrated the flow regimes resulting from example run-of-river diversion project development with implementation of standards including the Pulse Exemption Rule eliminate unnecessary impact on water supply while maintaining high flow pulse magnitudes and frequencies adequate to support the geomorphological characteristics

of the streams and sound ecological environments.

The commission agrees and acknowledges the comment.

SARA commented that with the 20% pulse rate diversion in the rules, the overbank flows will not impede most water projects from development, but would provide critical protection if an on-channel reservoir were ever to be proposed for permitting. Given the significant investment of time and financial resources by SARA and the state agencies participating in the SB 2 Instream Flow study, what scientific and analytical information does TCEQ have that justifies the removal of the overbank flow requirement from the San Antonio River environment flow recommendations? Additionally, another benefit that will occur from maintaining the overbank flows in the environmental flow standards, subject to the GSA BBASC's 20% diversion rate rule, is protection of inflows to the bay and estuary in those months where the instream flow standards are the bay and estuary requirement in the absence of specific frequency attainment targets.

The commission acknowledges that overbank flows are a component of a flow regime for a sound ecological environment. However, these flows have the potential to inundate low-lying areas. The flows the commission is protecting in the adopted rule are not calculated to result in water flowing out of the banks of the river. As noted elsewhere in this preamble,

overbank flows are the result of naturally occurring large rainfall events which will likely continue to occur. The commission notes that the 2011 Region L Water Plan did not include any on-channel water supply projects in the basin and bay systems covered by the adopted rules that would impact overbank flows. Under SB 3's adaptive management provisions, further analyses and studies will be performed in the future to determine whether the adopted standards, once implemented, continue to protect the environment. No change has been made in response to this comment.

NWF and Sierra Club-Lone Star commented that the stakeholders intended the 50% rule to apply between the single level of base flow and the subsistence level without regard to hydrologic condition for the three measurement points on the lower Guadalupe River only as part of a total package that provided offsetting protections. The effect of applying the 50% rule in this way is to allow additional diversions during those two seasons than could otherwise occur with three levels of base flows. Accordingly, subject to the qualification above about use of the 50% rule for single-season base flows, the commenters recommend that §298.375(b) and (c) be revised to reflect hydrologic conditions for two seasons for three measurement points on the Guadalupe River and for all seasons for the remaining measurement points in the Guadalupe River Basin.

The commission respectfully disagrees that it had to adopt the stakeholders' recommendations in their entirety because SB 3 clearly provides that the commission perform its own review of the stakeholders' recommendations. Under TWC, §11.1471, the commission is to adopt appropriate environmental flow standards "that are adequate to support a sound ecological environment, to the maximum extent reasonable considering other public interests and other relevant factors." The commission notes that application of the 50% rule, as set out in the adopted standards would maintain flow variability without the need for hydrologic conditions and leave some water available for future permitting. Hydrologic conditions are not included in the adopted rule for measurement points on the Guadalupe River. Therefore this revision is not necessary. No change has been made in response to this comment.

NWF and Sierra Club-Lone Star commented that the exclusion of pulse flows with durations of greater than 30 days has not been justified. For smaller pulses, up through the one-per-year pulse, these commenters recommended limiting the duration to 30 days as a step towards simplification. However, those pulses do need to be protected. In addition, larger pulse flows are needed to support a sound ecological environment and should be protected, even with a duration of longer than 30 days. In addition to playing key functions in riverine ecosystems, protection of large pulse flows is essential for

protecting freshwater inflows to estuaries, especially during the two seasons for which no specific freshwater inflow standards are proposed. The levels of protection recommended by the stakeholders should be incorporated, including application of multiple levels of pulse flows for the Guadalupe Basin and protection of the full suite of pulse flows recommended by the GSA BBASC. For purposes of high flow pulse engagement, the reference to flows being above the applicable base flow standard is inapposite. Pulse flow requirements are not dependent on hydrological condition and are applicable whenever the trigger level flow has been satisfied. By definition, those trigger levels are higher than the base flow levels. Additional description is needed about when pulse flow diversion restrictions apply and end. That is particularly important for the short-duration (two day) pulses at certain locations in the San Antonio River Basin because satisfaction of pulse flow requirements is measured in a more rigorous manner. The commenters requested that §298.375(d) be revised to include additional levels of high flow pulses in all river basins, to add the following phrase to §298.375(d)(4), ". . .and each time-period is independent of each other time-period with respect to high flow pulse frequency regardless of overlapping months, except as otherwise provided in subsection (7) of this section." to reference hydrologic conditions for all measurement points, and to include applicability requirements for additional pulse levels and for large pulses at measurement points specified in §298.380(c)(12) - (15).

The commission agrees that the adopted rule should specify application of the time period for large pulses described in §298.380(c)(12) - (15). In response to this and other comments adopted §298.375(d)(4) has been modified to reflect that time periods are independent of other time periods with respect to pulse flow frequency. The commission also agrees that pulse flows are independent of hydrologic conditions and §298.375(d)(1) was modified in response to this comment.

The commission respectfully disagrees that references to hydrologic conditions for all measurement points are needed because the adopted rule does not include hydrologic conditions for the Guadalupe River basin. The commission respectfully disagrees that additional applicability requirements are needed for large seasonal pulses at measurement points described in §298.380(c)(12) - (15) because the rule adequately describes application of the small and large pulse flow requirements in adopted §298.380(c)(12) - (15).

The commission also respectfully disagrees that additional applicability requirements are needed for once per year or larger pulse flows because the adopted rule does not include these high flow pulses. The commission reviewed information from the science team, including the hydrographic

separation which formed the basis for the science team's recommendations. In many instances, these large pulses appear to be comprised of one or more pulses connected by intervening periods of high base flows. This creates uncertainty regarding the calculation of these pulses because the identified pulses likely represent more than one pulse flow event. Further analyses and studies may need to be performed in the future to determine appropriate magnitudes, volumes, and durations of these larger pulse events. HB 3/SB 3 contemplate that these types of studies can be considered through adaptive management via the work plan for this basin and bay system. To the extent that additional information becomes available through monitoring and studies undertaken under the work plan, the science team could consider that information in future deliberations. The rule was not changed in response to this comment.

§298.380, Environmental Flow Standards

Balancing analysis

One individual commented that the balancing occurred towards additional flows for the environment. Whether you apply the east Texas structure, whether you apply TCEQ's rules or the data that was elucidated by the BBEST, the impacts in environmental flows are the same. And what is not -- what is different, however, is the impact on human needs. The population of Texas continues to grow. Limits on population aren't on the

horizon. The commenter stated that the three entities that depend upon surface water for future supply voted against the recommendations of the BBASC because they are charged with the responsibility of providing for human needs. It is simply irresponsible to consign surface water entirely to the environment without taking account for human needs.

The commission followed its instructions in the statute when drafting the adopted rules. Under TWC § 11.1471, the commission is to adopt appropriate environmental flow standards "that are adequate to support a sound ecological environment, to the maximum extent reasonable considering other public interests and other relevant factors." The commission has adopted many of the stakeholders' recommendations. The commission followed its instructions in TWC, §11.1471, by balancing human and other competing needs for water with scientific recommendations. The rule was not changed in response to this comment.

CCCC commented that the stakeholder's recommendations failed to meet SB3's balancing requirements and would jeopardize the economy of the region. CCCC further commented that TCEQ's proposed rules properly balance water supply needs with environmental needs and requests that TCEQ adopt the proposed rules.

The commission agrees and acknowledges the comment.

One individual commented that the quantitative results of scientific instream flow studies, as well as other quantitative analyses by TCEQ staff, GSA BBASC and others, have been used to evaluate flow regimes resulting from the implementation of a range of potentially feasible example projects operated in accordance with a range of potential environmental flow standards. Results of these evaluations indicate that flow variability, water quality, high-flow pulse frequency and freshwater inflows to San Antonio Bay will be maintained, and aquatic habitat will be available in comparable and often greater quantities and frequencies than without the example projects. For these reasons, it is the commenter's opinion that the adoption of the environmental flow standards as proposed by TCEQ staff will maintain sound ecological environments in these basins.

The commission agrees and acknowledges the comment.

One individual commented that inspection of the results from the ED's balancing analysis suggests that implementation of the instream criteria maintains almost all of the proposed frequencies of occurrence of freshwater inflow regime components that were specified by the stakeholders for the San Antonio Bay system.

The commission acknowledges the comment.

UGRA commented that that TCEQ's proposed rules properly balance water supply development with environmental needs.

The commission agrees and acknowledges the comment.

Four individuals commented that TCEQ should balance the needs of humans and the environment. One of these individuals commented that the recommendations submitted by the stakeholder committee very effectively balanced the needs to keep sufficient freshwater available for the bays and estuaries with opportunities to extract water by way of new permits. One of these individuals commented that the stakeholder recommendations already include many compromises that were carefully forged and agreed upon to balance human water supply needs with those of the environment. One of these individuals commented that TCEQ's balancing favored projects for special interest groups over the environment.

The commission followed its instructions in the statute when drafting the adopted rules. Under TWC, §11.1471, the commission is to adopt appropriate environmental flow standards "that are adequate to support a sound ecological environment, to the maximum extent reasonable

considering other public interests and other relevant factors." The commission has adopted many of the stakeholders' recommendations. The commission followed its instructions in TWC, §11.1471, by balancing human and other competing needs for water with the scientific recommendations. The commission believes that the adopted rules are sufficiently protective of the environment because they include a flow regime consisting of subsistence flows, base flows, high flow pulses, and a freshwater inflow standard. The adopted rules also allow for some future permitting. The rule was not changed in response to this comment.

One individual commented that the scenario used by TCEQ to develop the proposed rule uses a much higher new project yield of 135,000 acre-feet to account for the balancing of environmental and future consumptive water needs. The BBASC used a new project yielding 40,000 acre-feet and is based on the work of the Regional Planning Group in providing for future water demands. The TCEQ's much larger project is not documented. It is obvious that TCEQ's approach is skewed toward wringing as much water as possible from what little unappropriated water that remains in the system.

The commission acknowledges that the stakeholders performed an analysis of the impacts of the proposed standards on future water supply needs and considered the results of these analyses in their recommendations. The ED

also performed an analysis to address the issue of balancing human and other competing needs for water in the basin and bay system and discussed that analysis in the proposal preamble. The ED's selected scenario for the balancing analysis is based on a hypothetical diversion of an amount of water greater than the amount considered by the stakeholders but less than the amount identified in the Regional Water Plan as necessary for future human water needs. The commission notes that the stakeholders balancing analysis required a diversion of more than 40,000 acre-feet of water from the river in order to achieve the project yield. The ED's analysis was not intended as a finding that water is available for a specific project. However, the ED's analysis does address the question of whether new projects could be permitted. When applications for projects are evaluated, water availability is based on specific facts in those applications. No change has been made in response to this comment.

One individual commented that the GSA BBASC group did do modeling to look at a simplified structure and found it would make more water available for diversion for future projects, but it does not recognize or protect all aspects of the flow regime that science says is needed. The commenter believes that one of the tipping points for the stakeholders was that project yield could be obtained with the BBASC recommendations of 22,800 acre-feet per year. That came very close to the 25,000 acre-feet per year yield

called for in the Regional Water Plan. So, for pennies on the dollar, the group found a way to protect these key pieces of the flow regime while also allowing for human water supply development with only a very slight increase in the cost to the project. Therefore, to the group, that seemed like a reasonable balancing of needs.

The commission acknowledges that the stakeholders performed an analysis of the impacts of the proposed standards on future water supply needs and considered the results of these analyses in their recommendations. The SAC, in its discussion paper *Moving from Instream Flow Matrix Development to Environmental Flow Standard Recommendations* also notes that WAMs modified through the Regional Planning process to reflect implementation of future projects may not include the same assumptions for existing water rights and prior appropriation as the models used by the commission in its water availability determination for new permits. The commission's understanding is that the stakeholders used a model that does not appropriately subtract from availability existing water rights valued at their full authorization and included return flows. Such an analysis would therefore overestimate the likelihood that a project could be permitted. The ED also performed an analysis to address the issue of balancing human and other competing needs for water in the basin and bay system using his permitting model, and discussed that analysis in the

proposal preamble. The ED's selected scenario for the balancing analysis is based on a hypothetical diversion of an amount of water greater than the amount considered by the stakeholders but less than the amount identified in the Regional Water Plan as necessary for future human water needs. The ED's analysis was not intended as a finding that water is available for a specific project; however, the ED's analysis does address the likelihood that a new project could be permitted. When applications for projects are evaluated, water availability is based on specific facts in those applications. No change has been made in response to this comment.

CCA commented that TCEQ states in conclusory fashion that the ED "performed his own analysis to address the issue of balancing human and other competing needs for water in the basin," but the rule proposal contains no detailed description, no explanation, and no rational basis for that analysis or its conclusions. CCA commented that no interested person can comment meaningfully on a proposal that rests on such unidentified factual bases. CCA notes that this fatal flaw attends the TCEQ's comments on modeling by the ED for purposes of proposed §298.380 in the Guadalupe/San Antonio River Basin and bay system.

The balancing analysis performed by commission staff is detailed in the preamble to this adopted rule. The statute requires the commission to

adopt rules that will apply to the evaluation of new applications for new appropriations of water. When applying the adopted standards in determining availability for applications for new appropriations of water, staff will use its WAMs. Therefore, when performing its balancing analysis, staff used these same WAMs. The WAM used for staff's balancing analysis is available on the TCEQ's public Web site on the Environmental Flows Rulemaking Web page. The model and the discussion of the model application in the Section by Section Discussion for §298.380 provide the rational basis for staff's conclusions.

GBRA commented that in the development of the commission's proposed rule, the ED's balancing analysis considers the impacts of applications of various environmental flow criteria on the annual availability of a single synthetic scenario, specifically a run-of-river diversion in the Guadalupe River Basin. While the ED's analysis focuses upon the potential impact on annual availability of unappropriated flow, consideration of the monthly availabilities suggests the proposed instream rules have almost a 50% greater impact on the monthly availability of unappropriated flow over comparable results when the Lyons method is applied, and 66% greater impact on monthly availability than if no environmental flow criteria are applied. In the context of water availability, there are significant impacts from the proposed rules when viewed in a monthly context.

The commission acknowledges the comment and responds that its adopted rules are protective of the environment and also leave some water available for future permitting. The commission also responds that in response to this and other comments the Section by Section Discussion for §298.380 has been modified to further discuss the results of its balancing analysis.

GBRA commented that it understands the need for the ED to avoid the suggestion of a finding that water is available for specific projects. Yet it must be further recognized that the evaluation, development, and planning of future water supply is based heavily upon the yield of potential projects. GBRA commented that analysis of the ED's proposed standards suggests a significant impact upon firm yield with no scientifically demonstrated commensurate benefit to the environment. GBRA commented that adoption of a simplified framework with a single level of seasonal subsistence flows, a single level of seasonal "dry" base flows, and the seasonal 2/season pulse amounts identified by the GSA BBEST limit the impacts on water supply while maintaining a sound ecological environment.

The commission responds that based on information in the science team report and additional scientific information developed by the stakeholders, it appears that a flow regime consisting of only a dry base flow and a subsistence flow would be less protective. The commission acknowledges

that more water could be diverted if the environmental flow standards are lower. However, the commission's balancing analysis demonstrates that the standards in the adopted rule also allow for some water to be available for future permits. The rule was not changed in response to this comment.

GRTU commented that with regard to the analysis of balancing, or meeting the environmental flow recommendations to the "maximum extent reasonable considering other public interests and other relevant factors," the commission's justification for the proposed rule is deficient. Though the BBASC represents a wide array of interests they were able to reach consensus on 17 out of 28 of the major issues facing them and an overwhelming majority (better than 19-3) on the rest. They contracted with experts in water resource and ecological science to support their analysis, considered several realistic proposals for future water supply, clearly documented their rationale in the rare instances when they differed from the recommendations of their BBEST and developed innovative approaches to balance the needs of the environment with the needs of people including a Pulse Exemption Rule and 10% dedication of future projects to the environment. The product of their work was a 130-page report including a 900-page appendix. In contrast, the commission conducted a firm yield analysis of a single hypothetical project, almost certainly not reflective of any project that would realistically be proposed in this basin. For this analysis the commission provided the WAM input files and reported "annual availabilities" (a term not defined but presumably indicating

the percent of years in the period of record when 100% of the firm demand is available for diversion).

The commission considered all of the recommendations provided by the science team and the stakeholder groups and other relevant factors, including commission staff's water availability and water quality analyses, when drafting the adopted rules. The ED's analysis was not intended to be a firm yield analysis. It was an analysis of the impacts of the adopted standards on the amount of water a future permit could divert from the river. The annual availability is a calculation of the number of years in the period of record that 135,000 acre-feet of water could be diverted from the river under the specified conditions. The percentage of time that a water right can divert its full amount is the major factor in the determination of whether staff can recommend that a permit be granted.

The commission did not disregard any science team or stakeholder recommendations, but considered all of them and adopted many of the stakeholders' recommendations. The commission further responds that the adopted standards are not based solely on scientific information. No change has been made in response to this comment.

SARA commented that it ran additional analysis on TCEQ's draft standards to determine the impact they would have on the inflows to the bays and estuaries. SARA's analysis showed the TCEQ draft standards would allow water resource project storage facilities to refill faster than they would be allowed to under the GSA BBASC recommendation. The more rapid refilling of storage under the TCEQ proposed standards however came at the expense of inflows to the bays and estuaries in the most critical seasons, Spring and Summer, and would be most damaging as the lower inflows would prolong a drought's impacts.

The commission agrees that a future water rights permit would likely be able to divert more water under the adopted rules than under the stakeholders' recommendations. This is reflected in the results of the ED's balancing analysis presented in the Section by Section Discussion in §298.380, which has been modified in response to other comments. The commission notes that the adopted rules include subsistence flow levels that will limit diversion during extremely dry periods for permits to which this rule applies. Under SB 3's adaptive management provisions, further analyses and studies will be performed in the future to determine whether the adopted standards, once implemented, continue to protect the environment. The rule was not changed in response to this comment.

SMRF and two individuals commented that one site that TCEQ modeled is in the San Marcos River which makes no sense since there is not enough unpermitted water left in this river to be granting permits to withdraw it. SMRF believes there are many errors in the TCEQ models they used to set up their new proposed rules. Either that or TCEQ is seeing the modeled changes in flows to the bays and ignoring the damage that this will cause, prolonging drought way beyond what the bays can safely be assumed to be able to recover from.

The commission responds that the ED's modeling analysis for the proposed rules did not model a location on the San Marcos River but instead modeled a location on the Guadalupe River upstream of the confluence with the San Marcos River. The ED intended the analysis to be a conservative assessment of the impacts of the adopted standards on water availability. However, in response to other comments, the ED revised the analysis to include a location consistent with that used by the stakeholders, although the results of the analysis at the new point do not differ from the results of the analysis at the original point. The results of the modeling analysis are included in the Section by Section Discussion for §298.380. The commission responds that it also included freshwater inflow standards in the adopted rule. The rule was not changed in response to this comment.

NWF and Sierra Club-Lone Star commented that there was a mismatch in the spatial location of the theoretical diversion itself and the location of the evaluation of the environmental flow impacts of the diversion under each condition. The theoretical diversion used in the ED's balancing analysis, as was revealed within the WAM files and via communication with staff, is located at a site commonly known as H-5 on the Guadalupe River. Neither the GSA BBEST nor BBASC recommended environmental flow criteria at this site. The nearest site with recommendations by both the BBEST and BBASC, is several miles downstream at Gonzales, below the confluence with the San Marcos River, a major tributary of the Guadalupe River. Thus, flows at the H-5 site do not include contributions from the extensive San Marcos River drainage, which are reflected in the flows at the Gonzales site. However, the environmental flow parameters in the "proposed environmental flow standard" condition and the "stakeholder recommendations" condition were evaluated by the ED by simply taking the values proposed / recommended for the Gonzales site and applying them to the diversion site with no adjustments. The inevitable effect is that a reasonably protective flow standard recommended by the BBASC for the Gonzales site is unfairly portrayed as being unduly restrictive for water supply at the H-5 location because of an inappropriate modeling assumption. By contrast, because the ED apparently developed a proposed standard for the Gonzales site that would result in a more acceptable annual availability at the H-5 location, the mismatch inevitably forced the proposed standard downward to less protective levels.

The commission responds that it reviewed all of the model files and spreadsheets submitted by these commenters. The commission notes that simply moving the modeled location of the environmental flow standards to the downstream gage would not be an appropriate adjustment to account for the spatial mismatch identified in this comment. However, in response to this and other comments, the ED performed an additional balancing analysis with both the diversion and the environmental flow standards modeled at the point used by the stakeholders. That analysis demonstrates that irrespective of the location where the balancing analysis is performed, the outcome is the same. There would be a higher impact on water available for future permitting under the stakeholders' recommendations. The Section by Section Discussion for §298.380 has been modified to include this additional analysis. The rule was not changed in response to this comment.

NWF and Sierra Club-Lone Star, and Victoria commented that in the ED's evaluation of the condition described as "proposed environmental flow standard," the base flow values utilized in the WAM analyses do not match the base flows listed for the Spring and Summer seasons as "Base" in the proposed rule. TCEQ may have inadvertently used the average HEFR base flows for spring and summer in its impact analysis. NWF and Sierra

Club-Lone Star comment that their analysis indicates that application of the stakeholders' recommendations would result in an annual availability of 7% instead of 5% as reported in the proposed rule. Victoria commented that the TCEQ analysis of the impact of the proposed instream flow regime may be understated.

The commission agrees and responds that the ED's balancing analysis was adjusted to reflect this comment. The results of the analysis using the WAM, adjusted to correct the base flow value, indicate that the annual availability with application of the adopted standards would be 25%. The commission also responds that this modification to the WAM used in the balancing analysis did not change the results of the analysis, application of the stakeholders' recommendations result in a greater impact on water available for future permitting. The commission reviewed the models and spreadsheets submitted in support of this comment. The commission notes that the annual availability resulting from application of the stakeholders' recommendation, using both the WAM files on the commission's Web site and the WAM files submitted in support of this comment is 5%. The Section by Section Discussion for §298.380 was revised to reflect the corrected annual availability of 25%.

NWF and Sierra Club-Lone Star commented that the ED's modeling analyses to balance

environmental water needs and other human water supply needs were performed with no storage feature associated with the theoretical diversion. While this is not an irregular modeling approach in the WAM itself, it is incongruous with other efforts to achieve a balance between water supply and other needs for water in the Guadalupe River Basin. It differs from the balancing performed by the stakeholders in which that group examined water supply available with an off-channel reservoir of approximately 105,000 acre-feet capacity. The BBASC devoted a lot of time and financial resources to evaluating impacts of its recommendations on reasonably representative potential water supply projects. Additionally, many of the potential water supply projects in the Regional Plan covering the Guadalupe River Basin, indeed all large diversion options, envision a storage component because of the scarcity of reliable flows during drier times. Such off-channel reservoirs range in size from approximately 105,000 - 190,000 acre-feet. A reasonable balancing analysis must consider variations in potential water supply projects that can efficiently develop water supply in compliance with reasonably protective environmental flow standards. These commenters state that the BBASC had already reduced the BBEST recommendations when they performed their balancing and the TCEQ should not have reduced it further. The theoretical project as evaluated by the ED does not present a reasonable basis for analysis, and attempting, as the ED appears to have done, to come up with sufficiently weakened proposed standards to increase the annual availability value for the ill-suited hypothetical project up to about the same level as for the Default Methodology is not a reasonable approach.

The commission responds that it did not intend for its balancing analysis to be a finding that water was available for a specific project. The ED did not include a storage component in the modeling to support the balancing analysis because simply adding storage does not increase the amount of water a water right could divert from the river or the reliability of that diversion. Permitting decisions for an off-channel project would be based on the amount of water an applicant could divert from the river and there would need to be a reasonable amount of water available in the river that meets the criteria in the commission's statutes and rules. If the reliability of the river diversion is low, it could be difficult to recommend granting a permit. The commission notes that it has adopted many of the stakeholders' recommendations. Further, the commission believes that the adopted rules are sufficiently protective of the environment because they include a flow regime consisting of subsistence flows, base flows, high flow pulses, and a freshwater inflow standard. The rule was not changed in response to this comment.

Victoria and two individuals commented on the WAMs used in the ED's balancing analysis. Victoria is concerned with using a WAM based on monthly data to forecast the impact of the proposed environmental flow regime on water supply when it appears that

future projects will be based on daily diversions from the streams rather than impoundments on the streams. Victoria believes this may substantially overstate water availability, because water will be counted as available that is not actually available when realistic daily diversion capabilities and daily instream flow criteria are taken into account.

The commission responds that it has been clear from the beginning of this process that it would use its WAMs to perform its balancing. At a meeting with the stakeholders staff noted that water availability determinations for new permits are based on the commission's WAMs. The commission respectfully disagrees that using a monthly model overstates water availability because a major factor that determines whether a new permit can be issued is if there is sufficient water available for the application after the needs of all senior water rights are satisfied. The rule was not changed in response to this comment.

NWF commented that it does not feel that there is adequate justification for the changes that were made. There just simply isn't the rationale there that indicates what was behind it. It was not clear that there were environmental assessments done to analyze what effect these changes would have on the environment, and that's very concerning. The BBASC really worked hard to do the balancing, and we're very concerned that there

were some questionable positions made in the analysis to determine what the yield would be, and that there really is a large portion of the flow that's ignored and that isn't recognized, and that's concerning as well.

The commission has made efforts to be transparent in the process of developing the adopted rules. The commission considered information in the science team report, the SAC's review of this report, the stakeholder reports, comments on the proposed rules and supporting information for those comments, and performed water quality and water availability analyses. Staff provided detailed information and explanations of the modeling, science, and balancing, including a discussion of the differences in the models that were used by the stakeholders and TCEQ. This information was presented at two separate meetings with interested stakeholders, including the BBASC. These meetings were held after the proposal to discuss the information included in the preamble in order to assist these groups with developing comments on the proposed rule and to listen to their concerns. In addition to these meetings, staff also responded to a number of individual requests for information and explanation, including requests from members of the BBEST and the consultant for the BBASC committee after the proposal in order to provide further assistance. The commission acknowledges that the stakeholders performed an analysis

of the impacts of the proposed standards on future water supply needs and considered the results of these analyses in their recommendations. The ED also performed an analysis to address the issue of balancing human and other competing needs for water in the basin and bay system and discussed that analysis in the proposal preamble. The commission did not disregard any science team or stakeholder recommendations, but considered all of them. However, the commission respectfully disagrees that it had to adopt the recommendations in their entirety because SB 3 clearly provides that the commission perform its own review of the stakeholders' recommendations. As provided in TWC, §11.02362(o), the stakeholders develop recommendations not final environmental flow standards, and send their recommendations to the commission. Under TWC, §11.1471, the commission is to adopt appropriate environmental flow standards "that are adequate to support a sound ecological environment, to the maximum extent reasonable considering other public interests and other relevant factors." The rule was not changed in response to this comment.

§298.380(a) and (b), Environmental Flow Standards (Freshwater Inflows)

UGRA commented that additional rules for the bays and estuaries are not needed since compliance with instream environmental flow standards will maintain a sound estuarine ecological environment.

The commission responds that maintaining healthy bay systems is important. Therefore, the commission included freshwater inflow standards in the adopted rule for the protection of bays and estuaries. No change was made in response to this comment.

GBRA commented that in §298.380(a)(1), and (2), and (b), the ED has proposed a detailed regime of 18 freshwater inflow criteria for the San Antonio Bay System for the Spring and Summer Seasons (although GRBA recognizes that several of these components are utilized to describe requirements of joint probabilities). The preamble of the proposed rule states, "{t}he commission agrees with the stakeholders that, for months where there is no freshwater inflow standard in the proposed rule, application of the proposed instream flow standards to water right applications subject to this subchapter should provide sufficient flow to the bays and estuaries." While true for the winter and fall, this fact is also true for the spring and summer as well. Given present surface water planning in Region L, the work of the stakeholders' technical consultants demonstrates that the simplified framework for instream criteria are protective of the San Antonio Bay System, as the simplified framework yields almost exactly the same freshwater inflow regime as the full stakeholder recommendations (specifically, there is a difference of a single year of flows out of a 49-year period). Inspection of the results from the ED's balancing analysis suggest that implementation of the instream criteria

maintain almost all of the proposed frequencies of occurrence' specified for the San Antonio Bay System.

The commission agrees that its adopted standards are protective of instream flows and freshwater inflows.

GBRA commented that significant uncertainties exist in the salinity zonation analyses utilized in the development of the proposed standards, yet these uncertainties have not been quantified. Recognizing that the ED must work with information available, it must be noted that the science does not support the level of detail in the majority recommendations, nor in the proposed standards.

The commission responds that healthy bay systems are important. The commission reviewed the science team and stakeholder reports and based on information in these reports, the commission included freshwater inflow standards in the adopted rule for the protection of bays and estuaries. The commission acknowledges that further analyses and studies may need to be performed in the future to determine whether the adopted standards, once implemented, are protective. HB 3/SB 3 contemplate that this data and new studies can be considered through adaptive management via the work plan for this basin and bay system. To the extent that

additional information becomes available through monitoring and studies undertaken under the work plan, the science team could consider that information in future deliberations. The rule was not modified in response to this comment.

One individual commented that San Antonio Bay is, without a doubt, an extremely important component of the basin: environmentally, economically and recreationally. The proposed standards for the San Antonio Bay System create difficulties that gain nothing in terms of environmental flow protection that the simplified instream criteria themselves, if those are used, do not already achieve. For these reasons, explicit standards should not be included for the San Antonio Bay System, rather just utilize the instream flow criteria.

The commission responds that healthy bay systems are important. The commission reviewed the science team and stakeholder reports and based on information in these reports, the commission included freshwater inflow standards in the adopted rule for the protection of bays and estuaries. The commission acknowledges that further analyses and studies may need to be performed in the future to determine whether the adopted standards, once implemented, are protective. HB 3/SB 3 contemplate that this data and new studies can be considered through adaptive management

via the work plan for this basin and bay system. To the extent that additional information becomes available through monitoring and studies undertaken under the work plan, the science team could consider that information in future deliberations. The rule was not changed in response to this comment.

GEAA and TPWD commented on the impacts of reduced instream requirements on the bays. TPWD commented that, as drafted, the TCEQ's reduced instream pulse flow requirements will reduce inflows to the San Antonio Bay System. Reduced freshwater inflows will have negative consequences for the bay system by prolonging high salinities during dry conditions, among other things. For example, reduced freshwater inflows during 2011 led to record high salinities in Texas estuaries that contributed to a coast-wide red tide harmful algal bloom event. Fish mortality associated with this red tide event is estimated to be 4.4 million. In addition, the commercial oyster season was closed and fishery disaster declarations issued, resulting in estimated economic losses exceeding $7.5 million. TPWD recommends that the rules use the San Antonio Bay freshwater inflows recommended by the GSA BBASC. GEAA commented that the stakeholder recommendations for protecting bays and estuaries are based in part on the assumption that the stakeholder recommendations for streamflow would be honored by TCEQ.

The commission responds that maintaining healthy bay systems is important. Therefore, the commission included freshwater inflow standards in the adopted rule for the protection of bays and estuaries. The commission notes that the adopted rules include subsistence flow levels that will limit diversions during extremely dry periods for permits to which this rule applies. Under TWC, §11.1471, the commission is to adopt appropriate environmental flow standards "that are adequate to support a sound ecological environment, to the maximum extent reasonable considering other public interests and other relevant factors." The commission followed its instructions in TWC, §11.1471, to determine these flow standards. It considered all of the recommendations provided by the science team and the stakeholder groups and other relevant factors, including balancing human and other competing needs for water, when drafting the adopted rules. Among the factors it considers are the impacts of the adopted standards on future permitting, and this determination is basin specific. Using the stakeholder recommendations would not leave a water availability window for future permitting. Therefore, the commission proposed up to a 10% change in attainment frequencies to be applied during the water availability determination for new appropriations to allow for some potential future permitting. In response to this and other comments, the commission modified §298.380(a) to reduce the 10%

allowable impairment, where possible, to 5% or 8% depending on the specific inflow regime and to clarify how the allowable impairment will be calculated and applied in water availability determinations for new water rights or amendments subject to this subchapter. Under SB 3's adaptive management provisions, further analyses and studies will be performed in the future to determine whether the adopted standards, once implemented, continue to protect the environment. The commission believes that the adopted rules are sufficiently protective of the environment.

ICF and two individuals expressed concerns about the impact of the proposed rules on bays and estuaries. ICF commented that the reduction of freshwater inflows into our Texas bays has already impacted commercial fisheries and overall productivity. It is TCEQ's directive to provide water for people while maintaining a sound ecological environment. One of these individuals commented that the rules will cause a great economic and ecological disaster in a large segment of South Texas.

The commission agrees that healthy bay systems are important for economic and ecological reasons. The commission included freshwater inflow standards in the adopted rule for the protection of bays and estuaries. The commission balanced human and other competing needs for water in developing these standards. Applications for new appropriations

will be evaluated to ensure that the volumes and frequencies in the adopted standards are not impaired while still leaving some water available for future permitting. No changes were made in response to this comment.

NWF and Sierra Club-Lone Star commented that each of the potential impacts to a sound ecological environment noted by the Estuary Subcommittee are offset by the assumption that the full BBEST recommended criteria are in place and that high inflow events will continue to offset the deleterious impact of low flow periods. However with the proposed TCEQ rules, these assumptions are not valid and there is no evidence presented by TCEQ that a sound ecological environment would be supported, as potential adverse impacts to water quality, habitat suitability and availability, indices of biologic integrity, estuarine salinity patterns, sediment transport, nutrient delivery and species occurrence, abundance, endangered species, diversity are not protected against with these proposed rules. TCEQ in their proposed rules argue that high inflow events, such as overbank flows, "result from naturally occurring large rainfall events, which will likely continue to occur." However, as the proposed rules provide only limited protection for high flow pulses and no protection for overbank flows, such assumptions are not justified.

The commission acknowledges that overbank flows are a component of a flow regime for a sound ecological environment. However, these flows have

the potential to inundate low-lying areas. The flows the commission is protecting in the adopted rule are not calculated to result in water flowing out of the banks of the river. As noted elsewhere in the preamble, overbank flows are the result of naturally occurring large rainfall events which will likely continue to occur. The commission also notes that high rainfall events should continue to produce these flow levels. Review of the Regional Water Plans did not identify future large on-channel reservoir projects that would impair high flow pulses or overbank flows. The commission has adopted many of the stakeholders' recommendations. Further, the commission believes that the adopted rules are sufficiently protective of the environment because they include a flow regime consisting of subsistence flows, base flows, high flow pulses, and a freshwater inflow standard. Under SB 3's adaptive management provisions, further analyses and studies will be performed in the future to determine whether the adopted standards, once implemented, continue to protect the environment. The rule was not changed in response to this comment.

GBRA commented that the ED's attempt to consider an appropriate "balancing" of environmental flow needs and other human uses is commendable, as such consideration of these human needs by the stakeholder committee has been sorely lacking (particularly with regard to important economic considerations). However, there exists

significant uncertainty regarding the determination of "impairment" to the frequency of achieving estuarine criteria. The frequencies for the standard have not been specified, and are proposed to be established by 10% impairment from the baseline values in the commission's WAMs in effect at the time the first application for a water right permit or amendment subject to this subchapter is considered. In essence, frequencies that have not been identified yet are being proposed as a standard. Further, how this 10% impairment is to be assessed remains unclear, and would require that §298.380(a) be clarified such that: 1) the 10% impairment to the identified frequencies is to be applied individually to each freshwater inflow component (e.g., Spring 1, Spring 2) for which a frequency is identified; and 2) the 10% impairment is derived via addition or subtraction to each individual frequency criterion rather than by multiplication to the frequency criterion (i.e., if a frequency of no less than 30% is identified, than application of the 10% impairment would result in a standard target frequency of no less than 20%).

The commission responds that the WAM to be used for a specific application will be available to applicants and other entities who request the model at the time the application is processed. In response to other comments, the commission modified §298.380(a) to reduce the 10% allowable impairment, where possible, to 5% or 8% depending on the specific inflow regime. In response to this and other comments, the commission modified §298.380(a) to clarify how the allowable impairment

will be calculated and applied in water availability determinations for new water rights or amendments subject to this subchapter.

NWF and Sierra Club-Lone Star commented that the assessment approaches to be used for the specific inflow regimes are not stated in the current figures or elsewhere in the proposed rules. Some explanation is required for how the assessment will be undertaken and for whether an increase in value is to be avoided or a decrease in value. For example, as explained in the BBASC Report for some inflow regimes, the value to be assessed is the ratio of years with certain inflow levels, which is a subset of the total category, to the total number of years in the category. NWF and Sierra Club-Lone Star recommend that the figures in §298.380(a)(1) and (2) be revised to specify whether an increase or decrease is to be avoided and clarify calculation of the values for certain inflow levels.

The commission agrees that how impairment of the inflow regime will be calculated during the water availability determination for new appropriations of water could be clarified. In response to this and other comments, the commission modified §298.380(a) to provide this clarification.

GBRA and Victoria commented that the proposed "strategy target frequencies" present

additional issues that warrant further consideration. GBRA commented that the ED's specification of such "strategy target frequencies" exceeds the mandate of SB 3 as specified in TWC, §11.1471(b)(4), which states the commission shall consider, "the recommendations developed by the applicable basin and bay area stakeholders committee under §11.02362(0) regarding environmental flow standards and strategies to meet the flow standards." The "strategy target frequencies" enumerated within the proposed rule do not reflect "strategies to meet the standards," but rather establish a target higher than the standard which permitted strategies should strive to achieve. While GBRA supports that any strategies to meet the standards should be voluntary, these targets introduce further ambiguity and uncertainty into the proposed rule. The "strategy target frequency" for "Spring 4 and Spring 5 combined" is vague, as the interpretation could be either "Spring 5 should occur in less than 67% of the total occurrences of Spring 4 and Spring 5 combined," or "Spring 4 and Spring 5 combined should occur less than 67% of the total occurrences of conditions."

The commission respectfully disagrees that the "strategy target frequencies" cannot be included in the commission's rules. These frequencies would provide a benchmark for future permit amendments for the purpose of providing additional freshwater inflows to the bays and estuaries.

Under TWC, §11.1471, the commission is to adopt appropriate environmental flow standards "that are adequate to support a sound ecological environment, to the maximum extent reasonable considering other public interests and other relevant factors." TWC, §11.002(17), defines "environmental flow standards" as "those requirements adopted by the commission under Section 11.1471."

Additionally, the science teams are required to develop "a recommended environmental flow regime" for the system. "Environmental flow regime" is defined as a "schedule of flow quantities that reflects seasonal and yearly fluctuations that typically would vary geographically, by specific location in a watershed, and that are shown to be adequate to support a sound ecological environment and maintain the productivity, extent, and persistence of key aquatic habitats in and along affected water bodies."

TWC, §11.1471(b)(4), providing that "the recommendations developed by the applicable basin and bay area stakeholders committee under Section 11.02362(0) regarding environmental flow standards and strategies to meet the flow standards," does not conflict with the inclusion of strategy target frequencies in the adopted rule. The adopted rule also provides protections for voluntary strategies to meet the standards that are included in water

rights permits. In response to this and other comments, the commission modified §298.380(a) to reduce the 10% allowable impairment, where possible, to 5% or 8% depending on the specific inflow regime and to clarify how the allowable impairment will be calculated and applied in water availability determinations for new water rights or amendments subject to this subchapter.

Victoria commented that San Antonio Bay is without a doubt an extremely important component of the region from an environmental, economical, and recreational standpoint. The instream criteria have been repeatedly shown by stakeholders' and the ED's analyses to be adequate to support the environmental needs of the San Antonio Bay System given present surface water planning. Assessment of the 18 estuarine criteria adds additional unnecessary complexity to the permitting process, and requires additional labor for evaluation. In addition, significant uncertainty comes from the proposed estuarine standard being contingent on a model scenario that is yet to exist and that presently lacks a specification of required frequencies. Victoria is uncertain whether the bay and estuary matrices are necessary. It is Victoria's understanding that, based on the analysis of the hypothetical projects that have been examined to date, satisfaction of the proposed instream flow regime results in freshwater inflows that the BBEST and the BBASC believed were protective of the San Antonio Bay system. Victoria finds the use of the proposed matrices overly complicated and confusing. Based on

Victoria's understanding of the analyses that have been performed, the ED should not include explicit standards for the San Antonio Bay System, and should withdraw §298.380(a) and (b) and §298.355(4), (5), and (8).

The commission responds that healthy bay systems are important. The commission reviewed the science team and stakeholder reports based on information in these reports, the commission included freshwater inflow standards in the adopted rule for the protection of bays and estuaries. In response to this and other comments, the commission modified §298.380(a) to reduce the 10% allowable impairment, where possible, to 5% or 8% depending on the specific inflow regime and to clarify how the allowable impairment will be calculated and applied in water availability determinations for new water rights or amendments subject to this subchapter.

The commission acknowledges that further analyses and studies may need to be performed in the future to determine whether the adopted standards, once implemented, are protective. HB 3/SB 3 contemplate that this data and new studies can be considered through adaptive management via the work plan for this basin and bay system. To the extent that additional information becomes available through monitoring and studies undertaken

under the work plan, the science team could consider that information in future deliberations. The rule was not modified in response to this comment.

GBRA and Victoria commented that the proposed standards for the San Antonio Bay System create an operational dilemma that gains nothing in terms of environmental flow protection. These commenters request that the ED not include explicit standards for the San Antonio Bay System, and should withdraw §298.380(a) and (b) and §298.355(4), (5), and (8). The work plan and adaptive management process established by SB 3 and presently under development by the stakeholders allows the opportunity to monitor the effectiveness of these instream criteria, and continued consideration of the necessary components of the freshwater inflow regime and their associated frequencies of occurrence.

The commission responds that healthy bay systems are important. The commission reviewed the science team and stakeholder reports and based on the information in these reports, the commission included freshwater inflow standards in the adopted rule for the protection of bays and estuaries. Adopted §298.380(a) specifies that these standards would be applied during the water availability determinations for new appropriations of water and therefore could not impact operation of any

permit to which the standards apply. The commission acknowledges that further analyses and studies may need to be performed in the future to determine whether the adopted standards, once implemented, are protective. HB 3/SB 3 contemplate that this data and new studies can be considered through adaptive management via the work plan for this basin and bay system. To the extent that additional information becomes available through monitoring and studies undertaken under the work plan, the science team could consider that information in future deliberations. The rule was not modified in response to this comment.

CCA commented that one critical component of environmental flow standards is bay and estuary inflow standards and a critical component of these standards is the frequency at which they will be met. CCA commented that the commission can reduce science-based environmental flow standards developed by the BBEST on the ground that the BBEST's science is wrong but must provide a reasoned justification showing in what respect and to what extent the BBEST's science is wrong. The April 13, 2012, notice contains no such explanation. The TCEQ may also reduce environmental flow standards below the science even if it does not dispute the science. But to do so, TCEQ must explain why the particular reduction it proposes below the science is "the maximum extent reasonable considering other public interests and other relevant factors." And to make that explanation satisfy the reasoned justification requirements, the TCEQ must specify each

such other public interest and other relevant factor that makes its choice of its specific below-science based flow standards the "maximum extent reasonable," and the relevant facts, and show that that factor makes the reduced environmental flow standard the maximum extent reasonable. The April 13, 2012, notice contains no such explanation. TCEQ cannot just point to a BBASC recommendation because it alone has the authority to adopt appropriate environmental flow standards, and to make the decision that non-science factors require a specific reduction below the science. The fact that a BBASC has recommended a reduction in the science-based standards based on its view of the maximum extent it would be reasonable to follow the science is not, in itself, any reasoned justification whatsoever for the TCEQ to adopt that reduction. The BBASC recommendation for freshwater inflows to San Antonio Bay provides no reasoned justification for the specific recommendation of 18% summer season non-attainment instead of the science based 6%. TCEQ's proposed 10% additional departure even from the BBASC recommendation requires its own justification in terms of the specific non-science factors, and as to each factor, the specific facts that makes this additional departure from science reasonable. The April 13, 2012, contains no such explanation.

The commission respectfully disagrees that this level of detail is required, or even reasonable for this rulemaking. The science team for this basin and bay system developed a recommended environmental flow regime, or schedule of flow quantities adequate to support a sound ecological

environment. The stakeholders for this basin took the science team's recommendations and considered those recommendations in conjunction with other factors, including the present and future needs for water for other uses. The commission considered all of the recommendations provided by the science team and the stakeholder groups and other relevant factors, including commission staff's water availability analyses, when drafting the adopted rules. Therefore, the adopted standards are not based solely on scientific information. The commission followed its instructions in TWC, §11.1471, by balancing human and other competing needs for water with the scientific recommendations.

The commission takes very seriously its charge from the legislature to provide to the extent practicable for freshwater inflows and instream flows necessary to maintain the viability of the state's streams, rivers, and bay and estuary systems. The legislature has recognized that these environmental interests must be balanced by the commission with "all other public interests." It is not possible or practicable to catalog a precise weighing of countervailing interests that went into the commission's decision and is not required by statute. However, as explained elsewhere in this preamble, one of the important factors for the commission was to preserve the ability to permit at least some future surface water projects for

human needs. The commission has provided a more complete explanation of its decision in this preamble. In addition, the information used by the ED in performing his balancing analysis is available on the commission Web site. The rule was not changed in response to this comment.

NWF and Sierra Club-Lone Star commented that there is no justification provided in the proposed rule for the proposed reduction in the GSA bay and estuary freshwater inflow protections by 10% below the levels recommended by the GSA BBASC. There is nothing in the proposed rule that indicates using the BBASC freshwater inflow attainment frequencies would result in an unreasonable adverse impact to other public interests. The inflow regimes included in the proposed rules incorporate, for the drier period regimes, much lower protections, even without the 10% relaxation, than those indicated by the GSA BBEST as being adequate to support a sound ecological environment. The GSA BBASC undertook a balancing exercise and determined the reasonable water supply development could occur with the inflow regimes recommended by the BBASC. Additional weakening of those protections below the levels recommended by the BBASC are not justified. Accordingly, the commenting parties recommend that subsection (a) be revised as follows: "(a) A water right application in the Guadalupe and San Antonio River Basins and the San Antonio-Nueces Coastal Basin, which increases the amount of water authorized to be stored, taken, or diverted as described in §298.10 of this title (relating to Applicability), shall not cause or contribute to an impairment of the inflow

regimes as described in the figures in this subsection. Impairment of the inflow regime shall be evaluated as part of the water availability determination for a new water right or amendment that is subject to this subchapter. For purposes of this subsection, impairment would occur if the application, when considered in combination with any authorizations subject to this subchapter, which were issued prior to this application, would impair the modeled permitting frequency of any inflow regime."

The commission respectfully disagrees that it had to adopt the stakeholders' recommendations in their entirety because SB 3 clearly provides that the commission perform its own review of the stakeholders' recommendations. As provided in TWC, §11.02362(o), the stakeholders develop recommendations, not final environmental flow standards, and send their recommendations to the commission. The commission considered all of the recommendations provided by the science team and the stakeholder groups and other relevant factors, including balancing human and other competing needs for water, when drafting the adopted rules. Among the factors it considers are the impacts of the adopted standards on future permitting, and this determination is basin specific. Using the stakeholder recommendations would not leave a water availability window for future permitting. In addition to providing an availability window for future permitting, the allowable impairment recognizes that the WAMs for these

basins could change prior to consideration of the first application for a new appropriation subject to these rules. Therefore, the commission proposed up to a 10% change in attainment frequencies to be applied during the water availability determination for new appropriations to allow for some potential future permitting. In response to this and other comments, the commission modified §298.380(a) to reduce the 10% allowable impairment, where possible, to 5% or 8% depending on the specific inflow regime and to clarify how the allowable impairment will be calculated and applied in water availability determinations for new water rights or amendments subject to this subchapter.

One individual expressed concern that the bay system will not survive under the proposed rule, which would decimate a very valuable economy in Texas. While the BBASC adopted attainment frequencies for freshwater inflow protections, are a "make it no worse" approach, the proposed rule allows for a 10% reduction to those numbers. The proposed rule also omits the 10% dedication that stakeholders recommended as well as not protecting instream pulses larger than seasonal pulses that are critical to bay and estuary health. Yet the proposed rule boldly claims that somehow it would be protective of a sound ecological environment.

The commission agrees that healthy bay systems are important. The

commission included freshwater inflow standards in the adopted rule for the protection of bays and estuaries. In response to this and other comments, the commission modified §298.380(a) to reduce the 10% allowable impairment, where possible, to 5% or 8% depending on the specific inflow regime and to clarify how the allowable impairment will be calculated and applied in water availability determinations for new water rights or amendments subject to this subchapter.

The commission notes that these rules are intended to apply to new appropriations of water. The commission is unable to require a 10% dedication of water to the environment by applicants for new appropriations. TWC, §11.0235(d), states "The legislature has not expressly authorized granting water rights exclusively for: (1) instream flows dedicated to environmental needs or inflows to the state's bay and estuary systems; or (2) other similar beneficial uses."

Further, the commission believes that requiring this dedication would encourage applicants for new appropriations to request more water than they need. The rule was not changed to include the 10% dedication.

ICF, SMRF, and three individuals commented on the stakeholders' recommendation of a

10% dedication. ICF commented that the minimal recommendations sent forward by the BBEST and BBASC had been significantly reduced by resulting TCEQ proposed rules. ICF recommended that TCEQ rethink the proposed rules and amend them to include the recommendations from the BBASC concerning 10% return flow incentives in conjunction with the flow recommendations put forward by the BBEST. SMRF commented that the stakeholders saw the 10% dedication as following the process that was used in Corpus Christi where there is a stakeholder group that works out the details of how wastewater might be dedicated to helping recover the bay and estuary system. SMRF saw this as a type of committee that could exist in the future, that would be regional and locally based, that could help make recommendations as scientific information came in so that some water could be dedicated to make up for the fact that already so much water has been dedicated in this basin that the bays and estuaries are in trouble. SMRF also commented that this 10% dedication was not to be the kind of thing where people would apply for more water than they needed, but rather, find innovative strategies to perhaps dedicate a portion of their wastewater flows or other strategies that would allow this 10% dedication to help. Two of these individuals commented that the 10% dedication recommended by the stakeholders was an effort to improve the condition of our rivers and bays gradually, and is a step toward finding ways to get some wastewater discharges planned to actually continue to be discharged in the future, for the benefit of rivers and bays, or to get people to donate old senior water rights to keeping rivers flowing, which could have a huge impact if people knew the water would

stay in the rivers. TCEQ is not listening to the stakeholders about enacting this very important 10% dedication item.

The commission respectfully disagrees that this dedication can be required because these rules are intended to apply to new appropriations of water. The commission is unable to require a 10% dedication of new water to the environment by applicants for new appropriations. TWC, §11.0235(d), states "The legislature has not expressly authorized granting water rights exclusively for: (1) instream flows dedicated to environmental needs or inflows to the state's bay and estuary systems; or (2) other similar beneficial uses."

Further, the commission believes that requiring this dedication would encourage applicants for new appropriations to request more water than they need. In addition, some strategies, for example those for return flows, would require a water right permit for the water to be protected and as discussed above the commission is unable to grant new water rights for environmental uses. No change has been made in response to this comment.

SARA requested that the commission include the GSA BBASC recommended dedication

of water to the environment from new permits or amendments equal to 10% of the yield of the permit or amendment. Since the publishing of the draft standards, TCEQ has on several occasions mischaracterized the GSA BBASC's 10% dedication of water for the environment as requiring water right applicants to request an additional 10% over and above their actual needs. The recommended 10% dedication was proposed by the GSA BBASC as a way to catalyze the use of the Recommendation Report outlined strategies as well as others that may become viable. Thus the 10% dedication can be met by any number of strategies included in the BBASC Recommendation Report and Work Plan for Adaptive Management and would not require applicants to request 10% additional water beyond their needs.

The commission respectfully disagrees that it can require this dedication because these rules are intended to apply to new appropriations of water. The commission is unable to require a 10% dedication of water to the environment by applicants for new appropriations. TWC, §11.0235(d), states "The legislature has not expressly authorized granting water rights exclusively for: (1) instream flows dedicated to environmental needs or inflows to the state's bay and estuary systems; or (2) other similar beneficial uses." Further, the commission believes that requiring this dedication would encourage applicants for new appropriations to request more water than they need. The rule was not changed in response to this

comment.

NWF and Sierra Club-Lone Star commented that the rationale in the proposed rule for deleting the GSA BBASC 10% dedication to the bay and estuary system is unfounded. The stated justifications for not including the 10% dedication to the bay and estuary are that the proposed flow standards are protective of the environment without the 10% dedication. The rule also states that requiring the dedication would encourage applicants to request more water than needed. NWF and Sierra Club-Lone Star were unable to find any support for the statement that the proposed standards are protective without the 10% dedication. To our knowledge, no environmental assessment of the proposed standard was conducted and, certainly, no such assessment is referenced in the proposed rule package. As noted previously, there is no clear basis for contending that the full suite of BBASC recommendations is adequate to support a sound ecological environment. Considering the proposed rule strips away three additional key pieces of the GSA bay and estuary protections: 1) omission of large pulse flow protections that would protect delivery of water to the bay: overbank pulses as well as all large pulses in the Guadalupe Basin; 2) three tiers of base flows that reflect hydrologic conditions (in the Guadalupe); and 3) a 10% reduction to freshwater inflow attainment frequencies- this is more than a stretch. Concerning the second statement about encouraging requests for more water, it has always been our understanding that TCEQ is charged with evaluating the reasonableness of all applications and with only granting the amount

needed. However, more fundamentally, the stakeholder committee's recommendations are clear in supporting flexibility for meeting the equivalent of a 10% dedication, including through methods like dedicating a portion of return flows produced as a result of the new project.

The commission agrees that healthy bay systems are important. The commission reviewed the science team and stakeholder reports and based on information in these reports, the commission included freshwater inflow standards in the adopted rule for the protection of bays and estuaries. However, these rules are intended to apply to new appropriations of water. The commission is unable to require a 10% dedication of water to the environment by applicants for new appropriations. TWC, §11.0235(d), states "The legislature has not expressly authorized granting water rights exclusively for: (1) instream flows dedicated to environmental needs or inflows to the state's bay and estuary systems; or (2) other similar beneficial uses." Further, the commission believes that requiring this dedication would encourage applicants for new appropriations to request more water than they need. In addition, some strategies, for example those for return flows, would require a water right permit for the water to be protected and the commission is unable to grant new water rights for environmental uses.

The commission acknowledges that overbank flows and flushing flows are a component of a flow regime for a sound ecological environment. However, these flows have the potential to inundate low-lying areas. The flows the commission is protecting in the adopted rule are not calculated to result in water flowing out of the banks of the river. As noted elsewhere in this preamble, overbank flows are the result of naturally occurring large rainfall events which will likely continue to occur. The commission further responds that, as discussed in more detail elsewhere in this response, its adopted rules maintain flow variability in the Guadalupe River after diversions by water rights which are subject to these standards. Finally, in response to other comments, the commission modified §298.380(a) to reduce the 10% allowable impairment, where possible, to 5% or 8% depending on the specific inflow regime and to clarify how the allowable impairment will be calculated and applied in water availability determinations for new water rights or amendments subject to this subchapter. The commission believes the adoptive standards are protective of the environment and allow for some future permitting.

NWF and Sierra Club-Lone Star commented that the 10% dedication requirement for new appropriations, as recommended by the GSA BBASC, is a necessary component of a

package to contribute towards protecting a sound ecological environment. New appropriations, even when subject to other aspects of the flow standards, will reduce inflows to the bay system. Neither the BBASC recommended flow standards nor the proposed rules would be adequate to achieve the inflow levels recommended by the GSA BBEST as being adequate to support a sound ecological environment. In order to help offset those reduced inflows to some degree in order to get closer to supporting a sound ecological environment, the BBASC included the 10% dedication concept. The concept incorporates a flexible approach that would allow a permit holder to pursue alternate means of achieving the 10% amount without necessarily releasing water from the project. This type of permit condition is not unprecedented and is not inconsistent with SB 3. These commenters recommended that a new §298.385(c) be added to include the 10% dedication in the adopted rule and require the commission to ensure that dedicated water is legally protected from diversions and flows to the bay.

The commission responds that these rules are intended to apply to new appropriations of water. The commission is unable to require a 10% dedication of water to the environment by applicants for new appropriations. TWC, §11.0235(d), states "The legislature has not expressly authorized granting water rights exclusively for: (1) instream flows dedicated to environmental needs or inflows to the state's bay and estuary systems; or (2) other similar beneficial uses."

Some strategies, for example those for return flows, would require a water right permit for the water to be protected and the commission is unable to grant new water rights for environmental uses. Regarding protection of water dedicated from a new appropriation, water rights are administered in accordance with the prior appropriation doctrine where senior water rights can divert before more junior water rights. Once water passes the diversion point of a water right subject to this subchapter, that water is available for diversion by senior water rights located downstream in accordance with their priority date.

Under §298.380(a), the determination of impairment would be part of the water availability determination for new appropriations of water. The commission does not intend for this determination to result in special conditions in new water rights subject to this subchapter. However, the commission's adopted §298.380(d) provides that applications for new appropriations of water not be allowed to reduce the modeled permitting frequency below the levels that would occur with voluntary permitted strategies in place. The rule was not changed to include the 10% dedication.

OPIC commented that the proposal also argues that a 10% dedication, as proposed by

the stakeholder committee for the GSA BBASC, would simply encourage applicants to request more water than necessary. Water rights are dependent upon the amount of water the right holder has beneficially used under TWC, §11.025 and §11.026. Any water above that amount or for a different purpose is not considered appropriated or perfected. If applicants for valuable water rights can so easily obtain an amount 10% above what they beneficially use, whether the 10% dedication creates an additional incentive is rather beside the point.

The commission agrees that an applicant cannot easily obtain an amount of water over 10% of what it needs. However, an applicant could be able to show that it can beneficially use a certain amount, and that it could beneficially use another higher amount, both of which are possibly available. The applicant may choose to request the upper amount in order to obtain enough water to provide the 10% dedication, not because they want or need that amount at the present time. In addition, the commission notes that these rules are intended to apply to new appropriations of water. TWC, §11.0235(d), states "The legislature has not expressly authorized granting water rights exclusively for: (1) instream flows dedicated to environmental needs or inflows to the state's bay and estuary systems; or (2) other similar beneficial uses." Therefore, the commission is unable to require a 10% dedication of water to the environment by applicants for new

appropriations. The rule was not changed in response to this comment.

NWF and Sierra Club-Lone Star commented that the language of proposed §298.380(b) closely matches the GSA BBASC recommendations. However, one aspect of that language is problematic. As drafted, the language could be read as indicating that improvements in inflows as a result of the implementation of strategies would only be protected if those improvements actually fully meet the freshwater inflow standards rather than if they merely incrementally help to get closer to meeting those standards. The commenters hope that TCEQ's intent is to protect incremental improvements along the path to meeting the standard because proceeding in incremental steps will be essential. That certainly is what the commenters understand that the GSA BBASC intended. The commenters requested that §298.380(b) be revised to add the word "help."

The commission agrees and §298.380(b) has been modified to include this change.

NWF and Sierra Club-Lone Star commented that the needed freshwater inflow protections cannot be achieved solely through the freshwater inflow standards because, among other things, those inflow protections only cover two seasons. During the remaining months, inflow protections are dependent on protections provided through

instream flow criteria. Best available science indicates that at least the levels of instream flow protections recommended by the GSA BBEST are needed in order to provide adequate inflows during those remaining months to protect a sound ecological environment. The GSA BBASC recommended, as a result of its balancing exercise, some relaxation of those instream flow protections. There certainly is not an adequate basis to support a statement that a sound ecological environment in the bays can be maintained without including instream flow standards at least as protective as those recommended by GSA BBASC and even those recommended by the BBEST. The commission has not provided adequate support for this contention.

The commission considered all of the recommendations provided by the science team and the stakeholder groups and other relevant factors, including balancing human and other competing needs for water, when drafting the adopted rules. Among the factors it considers are the impacts of the adopted standards on future permitting, and this determination is basin specific. Using the stakeholder recommendations would not leave a water availability window for future permitting. Therefore, the commission proposed up to a 10% change in attainment frequencies to be applied during the water availability determination for new appropriations to allow for some potential future permitting. In response to this and other comments, the commission modified §298.380(a) to reduce the 10%

allowable impairment, where possible, to 5% or 8% depending on the specific inflow regime and to clarify how the allowable impairment will be calculated and applied in water availability determinations for new water rights or amendments subject to this subchapter. Under SB 3's adaptive management provisions, further analyses and studies will be performed in the future to determine whether the adopted standards, once implemented, continue to protect the environment. The commission believes that the adopted rules are sufficiently protective of the environment because they include a flow regime consisting of subsistence flow, base flow, high flow pulses, and a freshwater inflow standard. The numerical values for the flow regime components are those recommended by the stakeholders.

§298.380(c), Environmental Flow Standards (Instream Flows)

GBRA commented that for three of the measurement points in the Guadalupe Basin (i.e., Guadalupe River at Gonzales, Guadalupe River at Cuero, and the Guadalupe River at Victoria) the base flow criteria utilized are the base flows occurring in "wet" conditions, while other gages in the basin are based upon "average" conditions. They comment that the ED should not require these "wet" base flows, but rather the "dry" base flows for all gages in the Guadalupe River Basin as identified by the GSA BBEST, as the analyses performed during the stakeholder process demonstrate that if the flow at the applicable measurement point is above the subsistence flow standard but below the

applicable "dry" base flow standard, and 50% of the difference between measured streamflow and the applicable subsistence flow is allowed to pass the measurement point, an adequate flow regime is produced that provides the magnitudes and variability in flows necessary for greater habitat quantity and quality.

The commission agrees that the 50% rule supports variability. However, using only dry base flow in the adopted standards would limit the range within which the remaining flows after diversion by a water right subject to this subchapter would be variable. The commission also responds that it reviewed the habitat information included in the science team and stakeholder reports, as well as the information provided in support of this comment. Based on its review, the commission believes its adopted rules would maintain habitat conditions in the Guadalupe River after diversions by water rights subject to this subchapter and are therefore protective of the environment. The rule was not changed in response to this comment.

GBRA and Victoria commented that the recommended summer pulse criteria for the three locations on the Guadalupe River would require a pulse that has previously occurred on the average once a summer to be provided twice per summer, should such pulses occur. These flow criteria are based on a long-term average, and the commenters are unaware of any science suggesting an environmental need for this additional level of

protection in the summer at these three locations. The commenters stated that for the summer pulse requirements at these three measurement locations the ED should use the specific historically observed pulse magnitudes, volumes, and durations associated with the two-per season historical frequencies. GBRA commented that if the two-per-season summer pulse is not significantly greater than the selected seasonal base flow, TCEQ should exclude the summer pulse requirement. Victoria commented that it appears that using the once per season high flow pulse target for a two-per-season high flow pulse requirement does not substantially reduce the amount of water for water supply or substantially increase the amount of instream flow available for the environment, given application of the proposed 20% rule.

The commission respectfully disagrees because the frequencies referred to in the comment are derived from a HEFR-processed hydrographic separation. Review of historical gage records indicates that qualifying pulses, as determined in accordance with the adopted rule, did in fact occur twice per season in some of the wetter periods. The commission notes that if one of these larger pulses occurs, a new water right permit would need to pass that pulse and if two of these pulses occur, a water right holder would need to pass two of these pulses. This would provide additional protection during wetter periods with little impact on water availability for future permits. The commission agrees that the stakeholders' recommended two-

per-season pulse is not significantly greater than the seasonal base flow in the adopted rule but respectfully disagrees that this supports removing the summer pulse requirement. The commission reviewed whether adding a larger pulse requirement in the summer could provide additional freshwater inflows without large impacts on remaining unappropriated water and found that adding this larger pulse requirement did not significantly impact the remaining unappropriated water. The rule was not changed in response to this comment.

SARA commented that TCEQ has dramatically altered the GSA BBASC's recommendations without considering the guidance provided by the SAC, which was created to provide scientific advice on the SB 3 process. The SAC recommended the same structure used in the SB 2 TIFP in order to maximize consistency in the framework of environmental flow recommendations in Texas. SARA recommended that TCEQ adhere to the scientific recommendations of the SAC and GSA BBEST and include multiple levels of base flow and high pulse flows in the standards or provide the scientific justification why such multiple levels of base and pulse flows are not necessary. The TCEQ refers to the single-tiered base flow and minimized high flow pulse structure as a "simplified structure." It is not evident in reviewing the intent of the SB 3 legislation that simplicity was a goal. As water management in Texas is not simple, why do the proposed rules reflect a "simplified structure" that is not supported by any of the

most recent guidance or recommendations from noted scientists in the state and throughout the nation?

The commission did not disregard the science team recommendations, the SAC's review of those recommendations, or the stakeholder recommendations, but considered all of them. However, the commission respectfully disagrees that it had to adopt the stakeholder recommendations in their entirety because SB 3 clearly provides that the commission perform its own review of the stakeholders' recommendations. As provided in TWC, §11.02362(o), the stakeholders develop recommendations, not final environmental flow standards, and send their recommendations to the commission. Under TWC, §11.1471, the commission is to adopt appropriate environmental flow standards "that are adequate to support a sound ecological environment, to the maximum extent reasonable considering other public interests and other relevant factors." The commission notes that it has adopted many of the stakeholders' recommendations.

The commission further responds that although the adopted rules do include a single base flow standard for some locations, flow variability would be maintained by only allowing water right permits subject to the

adopted rules to divert 50% of the flow between subsistence and wet base flow. Therefore, once the standards are implemented in a water right permit, the remaining base flows after diversion would be variable. Regarding the simplified structure, the commission responds the adopted standards are not based solely on scientific information. The SAC, in its discussion paper *Moving from Instream Flow Matrix Development to Environmental Flow Standard Recommendations* notes that recommendations for environmental flow requirements that replicate historical flow parameters could be considered as the maximum flows needed to support a sound ecological environment. The SAC further states that components of the overall flow matrix could perhaps be significantly altered and still be protective of a sound ecological environment. The commission followed its instructions in TWC, §11.1471, by balancing human and other competing needs for water with the scientific recommendations.

Staff provided detailed information and explanations of the modeling, science, and balancing and also made this information available upon requests from interested parties. The commission also responds that the information used by the ED in performing his balancing analysis is available on the commission Web site. The rule was not changed in response to this comment.

SARA commented that the stakeholder recommendations included a typographical error for the Fall dry base flow for the San Antonio River at Goliad gage and that this error was carried forward into the proposed rule. The lowest tier base flow for the Fall currently states 367 however it should read 167.

The commission agrees and the rule has been modified to change this value.

SMRF commented that without specifically protecting the stakeholders' recommended pulses and base flows, the water permitting process is wide open for large dams that could capture the high pulses. It is not good enough to say, "there's no plans for a dam right now."

The adopted rules include both base and pulse flows. The commission notes that the 2011 Region L Water Plan did not include any large on-channel water supply projects in the basin and bay systems covered by the adopted rules. The commission believes that the adopted rules are sufficiently protective of the environment because they include a flow regime consisting of subsistence flows, base flows, high flow pulses, and a freshwater inflow standard. Under SB 3's adaptive management provisions, further analyses and studies will be performed in the future to

determine whether the adopted standards, once implemented, continue to protect the environment. The rule was not changed in response to this comment.

NWF and Sierra Club-Lone Star commented that the low levels of flow protection in proposed §298.380(c)(1) - (c)(9) for the Guadalupe River are not justified as being adequate to support a sound ecological environment or as being needed to avoid an unreasonable adverse impact on other public interests. Accordingly, the figures should be revised to include the components recommended by the stakeholders. As an additional basis for the recommended revisions, the commenters noted that the proposed rules appear to have substituted the pulse size of the summer one-per-season pulse for the summer two-per-season pulse at three locations: Guadalupe River at Gonzales, Guadalupe River at Cuero, and Guadalupe River at Victoria. The larger pulse is still called for in the proposed rules with a frequency of twice per season. Although the substitution may have been intended to provide for an increased level of protection, it is far from clear that it would accomplish that goal. It actually is quite unlikely that the larger pulse would occur twice in any season. Historical statistics indicate that it would not. As a result, the intended protection likely would prove to be illusory because the smaller-sized pulses, which would be expected to occur twice per season, would not be protected and could be diverted. By contrast, the second of the larger-sized pulses which is "protected" under the proposed rule is unlikely to occur and so would not

actually deliver any environmental benefit. For purposes of simplification, durations of one-per-year pulses and seasonal pulses have been limited to no more than 30 days, durations of one-per-two-year pulses have been limited to no more than 60 days, and durations of one-per-five-year pulses have been limited to no more than 90 days. The specific requested values are included in the comment.

The commission respectfully disagrees with the comment regarding the frequency at which the larger pulse would occur during the summer season. The frequencies referred to in the comment are derived from a HEFR-processed hydrographic separation. Review of historical gage records indicates that qualifying pulses, as determined in accordance with the adopted rule, did occur twice per season, or more often, in some of the wetter periods. The commission notes that if one of these larger pulses occurs, a new water right permit would need to pass that pulse and if two of these pulses occur, a water right holder would need to pass two of these pulses. This would provide additional protection during wetter periods. The commission also notes that the stakeholders' recommended two-per-season pulse is not significantly greater than the seasonal base flow in the adopted rule and would likely provide limited additional protection.

The commission is not including pulses with frequencies greater than one-

per-season in the adopted rule. The commission reviewed information from the science team, including the hydrographic separation which formed the basis for the science team's recommendations. In many instances, these large pulses appear to be comprised of one or more pulses connected by intervening periods of high base flows. This creates uncertainty regarding the calculation of these pulses because the identified pulses likely represent more than one pulse flow event. Further analyses and studies may need to be performed in the future to determine appropriate magnitudes, volumes and durations of these larger pulse events. HB 3/SB 3 contemplate that these types of studies can be considered through adaptive management via the work plan for this basin and bay system. To the extent that additional information becomes available through monitoring and studies undertaken under the work plan, the science team could consider that information in future deliberations. The rule was not modified in response to this comment.

NWF and Sierra Club-Lone Star commented that the low levels of pulse flow protection in proposed §298.380(c)(10) - (16) are not justified as being adequate to support a sound ecological environment or as being needed to avoid an unreasonable adverse impact on other public interests. Accordingly, the referenced figures should be revised to include the stakeholders' recommendations. For purposes of simplification,

durations of one-per-year pulses and seasonal pulses have been limited to no more than 30 days, durations of one-per-two-year pulses have been limited to no more than 60 days, and durations of one-per-five-year pulses have been limited to no more than 90 days.

The commission is not including pulses with frequencies greater than one-per-season in the adopted rule. The commission reviewed information from the science team, including the hydrographic separation which formed the basis for the science team's recommendations. In many instances, these large pulses appear to be comprised of one or more pulses connected by intervening periods of high base flows. This creates uncertainty regarding the calculation of these pulses because the identified pulses likely represent more than one pulse flow event. Further analyses and studies may need to be performed in the future to determine appropriate magnitudes, volumes, and durations of these larger pulse events. HB 3/SB 3 contemplate that these types of studies can be considered through adaptive management via the work plan for this basin and bay system. To the extent that additional information becomes available through monitoring and studies undertaken under the work plan, the science team could consider that information in future deliberations. The rule was not modified in response to this comment.

Water Right Permit Conditions

NWF and Sierra Club-Lone Star commented that although it may often work out that "flow restriction special conditions" would be adequate to ensure compliance with the environmental flow standards, there is no need to constrain the commission's discretion in this manner. It simply is not possible now to predict precisely what types of permit applications the commission may be asked to consider in the future and the commission should retain flexibility to protect the flow standards. For example, consider the case of a proposed permit that, because of flow restriction special conditions, would comply with instream flow requirements but would slightly impair an applicable freshwater inflow requirement. TCEQ should retain the flexibility to include some other type of permit condition, besides a flow restriction, that would be sufficient to address the impairment if using that other type of condition would be the most efficient way to proceed. Nothing in SB 3 purports to limit the types of permit conditions to be used in protecting environmental flows. TCEQ should not unduly limit its options in this respect. The commenters recommended that §298.385(a) - (b) be revised to remove the phrase, "flow restriction."

The commission responds that freshwater inflow standards are included in adopted §298.380(a). The provisions of adopted §298.380(a) would not allow a permit or amendment for a new appropriation of water to impair

the freshwater inflow standards beyond the allowable impairment in the adopted rule. Adopted §298.380(a) includes provisions specifying how the freshwater inflow standards will be protected in the determination of water availability for a new application to store take or divert water. The adopted instream flow standards in Chapter 298 will be included in permits for new appropriations of water as special conditions. Special conditions that protect environmental flow standards would be those special conditions that ensure compliance with the standards. The commission will implement these standards in each permit granted for a new appropriation of water. The commission also responds that applications for new appropriations of water currently receive flow restrictions based on their location and facts provided in the application. Similarly, an application for a new appropriation of water under these rules will receive streamflow restrictions as provided by the adopted rules. The rule was not changed in response to this comment.

SUBCHAPTER C: SABINE AND NECHES RIVERS, AND SABINE LAKE BAY

§298.290

Statutory Authority

The amended section is adopted under Texas Water Code (TWC), §5.102, concerning General Powers; TWC, §5.103, concerning Rules; and TWC, §5.105 concerning General Policy, which authorize the commission to adopt rules as necessary to carry out its power and duties under the TWC. The amended section is also adopted under TWC, TWC, §11.0235, concerning Policy Regarding Waters of the State; TWC, §11.02362(p) and (q) concerning Development of Environmental Flow Regime Recommendations; TWC, §11.147, concerning Effects of Permit on Bays and Estuaries and Instream Uses; and TWC, §11.1471, concerning Environmental Flow Standards and Set-Asides.

The adopted amended section implements TWC, §§11.0235, 11.0236(p) and (q), 11.147, and 11.1471.

§298.290. Schedule for Revision of Standards.

The <u>adopted</u> environmental flow standards or environmental flow set-asides [adopted herein] for the Sabine and Neches Rivers, their associated tributaries, and Sabine Lake Bay may be revised by the commission through the rulemaking process. <u>The Sabine and Neches basin and bay area stakeholder committee shall submit their</u>

review of the adopted environmental flow standards by September 1, 2013, and every five years thereafter. If the stakeholder committee recommends revisions to the adopted environmental flow standards, and the commission agrees, the rulemaking process shall be undertaken in conjunction with the periodic review. The final revised rules arising from a rulemaking undertaken in conjunction with any such periodic review shall be effective within one year after the deadline for the review ~~of the stakeholder's submittal of their review~~ of the adopted environmental flow standards. [The final revised rules shall be effective no sooner than ten years from the effective date of this rule, unless the Sabine and Neches basin and bay area stakeholder committee submits a work plan approved by the advisory group under Texas Water Code, §11.02362(p), that provides for a periodic review to occur more frequently. In that event, the commission may provide for the rulemaking process to be undertaken in conjunction with the periodic review if the commission determines that schedule to be appropriate.] The rulemaking process shall include participation by a balanced representation of stakeholders having interests in the Sabine and Neches Rivers, their associated tributaries, and Sabine Lake Bay.

SUBCHAPTER D: COLORADO AND LAVACA RIVERS, AND MATAGORDA AND LAVACA BAYS

§§298.300, 298.305, 298.310, 298.315, 298.320, 298.325, 298.330, 298.335, 298.340

Statutory Authority

The new sections are adopted under Texas Water Code (TWC), §5.102, concerning General Powers; TWC, §5.103, concerning Rules; and TWC, §5.105 concerning General Policy, which authorize the commission to adopt rules as necessary to carry out its power and duties under the TWC. The new sections are also adopted under TWC, §11.0235, concerning Policy Regarding Waters of the State; TWC, §11.147, concerning Effects of Permit on Bays and Estuaries and Instream Uses; and TWC, §11.1471, concerning Environmental Flow Standards and Set-Asides.

The adopted new sections implement TWC, §§11.0235, 11.147, and 11.1471.

§298.300. Applicability and Purpose.

This subchapter contains the environmental flow standards for the Colorado and Lavaca Rivers, and Matagorda and Lavaca Bays. The provisions of this subchapter have control over any provisions of Subchapter A of this chapter (relating to General

Provisions) that are inconsistent with this subchapter relating to environmental flow standards and regulation in the Colorado and Lavaca Rivers, and Matagorda and Lavaca Bays.

§298.305. Definitions.

The following words or phrases have the following meanings in this subchapter unless the context clearly indicates otherwise:

(1) Annual average inflow--the long-term average annual volume of freshwater inflows at the most downstream point in the Colorado River Basin.

(2) Annual strategy frequency--the frequencies at which specific levels of freshwater inflows occur and which are used for the sole purpose of providing additional freshwater inflows to Matagorda and Lavaca Bays through voluntary strategies.

(3) Average condition--for all measurement points, the hydrologic condition that would occur approximately 50% of the time.

(4) Dry condition--for all measurement points except those measurement points on the Colorado River below Lake Travis, the hydrologic condition that would occur approximately 20% of the time and represents periods when conditions are dry but not severe. For all measurement points on the Colorado River below Lake Travis, the hydrologic condition that would occur approximately 45% of the time and that is intended to represent periods when conditions are drier than average conditions but not severe.

(5) Fall--for the measurement points on the Colorado River and its tributaries above Lake Travis, the period of time September through October, inclusive, and for all other measurement points, the period of time September through November, inclusive.

(6) Fall inflow quantity--during any individual calendar year, the maximum freshwater inflow quantity, at the most downstream point in the Lavaca River Basin and at the most downstream point on Garcitas Creek in the Lavaca-Guadalupe Coastal Basin, occurring during any period of three consecutive months beginning in the months of August, September, or October.

(7) Fall season quantity--the maximum freshwater inflow quantity, at the most downstream point in the Colorado River Basin, occurring during any three consecutive months during the period from August through December, inclusive.

(8) Intervening inflow quantity--the quantity of freshwater inflows, at the most downstream point in the Lavaca River Basin and at the most downstream point on Garcitas Creek in the Lavaca-Guadalupe Coastal Basin, occurring during the remaining six months of the calendar year, that were not included in the Fall Inflow or Spring Inflow for that calendar year.

(9) Intervening season quantity--the quantity of freshwater inflows, at the most downstream point in the Colorado River Basin, occurring during the six months of the calendar year that are not counted towards the fall season quantity or the spring season quantity for that year.

(10) Inflow regime level--one of the annual freshwater inflow patterns ~~pattern~~, at the most downstream point in the Colorado River Basin for Matagorda Bay, that includes a spring season quantity, a fall season quantity, and an intervening season quantity as described in Figure: 30 TAC §298.330(a)(2) of this title (relating to Environmental Flow Standards), or at the most downstream point in the Lavaca River Basin and the most downstream point on Garcitas Creek in the Lavaca-Guadalupe

Coastal Basin for Lavaca Bay, that includes a spring inflow ~~season~~ quantity, a fall inflow ~~season~~ quantity, and an intervening inflow ~~season~~ quantity as described in Figure 30: TAC §298.330(c) of this title.

(11) Long-Term annual strategy quantity--the annual average volume of freshwater inflows, which is used for the sole purpose of providing additional freshwater inflows to Matagorda Bay through voluntary strategies.

(12) Modeled annual frequency--the frequency at which specific levels of freshwater inflows occur in the commission's water availability models for the Colorado and Lavaca river basins and the Colorado-Lavaca and Lavaca-Guadalupe coastal basins at the time the first water right application subject to this subchapter is processed.

(13) Monthly ~~strategy~~ threshold inflow--the total volume of freshwater inflows, at the most downstream point in the Colorado River Basin, in any calendar month~~, which is used for the sole purpose of providing additional freshwater inflows to Matagorda Bay through voluntary strategies.~~

(14) Severe condition--for all measurement points, the hydrologic condition that would occur approximately 5% of the time and that is intended to represent the driest periods.

(15) Spring--the period of time March through June, inclusive.

(16) Spring inflow quantity--during any individual calendar year, the maximum freshwater inflow quantity, at the most downstream point in the Lavaca River Basin and at the most downstream point on Garcitas Creek in the Lavaca-Guadalupe Coastal Basin, occurring during any period of three consecutive months beginning in the months of February, March, April, or May.

(17) Spring season quantity--during any individual calendar year, the maximum freshwater inflow quantity, at the most downstream point in the Colorado River Basin, occurring during any three consecutive months during the period from January through July, inclusive.

(18) Sound ecological environment--characterized by flow regimes that support existing biological communities in rivers, riparian, bay, and estuary habitats.

(19) Summer--the period of time July through August, inclusive.

(20) Wet condition--for all measurement points except those measurement points on the Colorado River below Lake Travis, the hydrologic condition

that would occur approximately 25% of the time and that is intended to represent the wettest conditions.

(21) Winter--for the measurement points on the Colorado River above Lake Travis, the period of time November through February, inclusive, and for all other measurement points, the period of time December through February, inclusive.

§298.310. Findings.

(a) The Colorado and Lavaca Rivers and their associated tributaries and Matagorda and Lavaca Bays and their associated estuaries are healthy and sound ecological environments.

(b) For the Colorado and Lavaca Rivers, and their associated tributaries, the commission finds that these sound ecological environments can best be maintained by a set of flow standards that implement a schedule of flow quantities that contain subsistence flow, base flow, and high flow pulses at defined measurement points. Minimum flow levels for these components will vary by season and by year since the amount of precipitation and, therefore, whether a system is in subsistence or base flow conditions, will vary from year to year and within a year from season to season, and the number of pulses protected will also vary with the amount of precipitation.

(c) For Matagorda and Lavaca Bays, the commission finds that the sound ecological environment of Matagorda and Lavaca Bays can best be maintained by a set of freshwater inflow standards that include variable freshwater inflow quantities and that incorporate inflow and frequency targets at which specific levels of freshwater inflows occur, which are used for the sole purpose of providing additional freshwater inflows to Matagorda and Lavaca Bays through voluntary strategies ~~that vary by season~~.

(d) For East Matagorda Bay, the commission does not adopt environmental flow standards but finds that the sound ecological environment of East Matagorda Bay can be maintained by avoiding further reduction of freshwater inflows, to the extent those reductions can be avoided, and that strategies to provide additional freshwater inflows to East Matagorda Bay should be pursued.

§298.315. Set-Asides and Standards Priority Date.

The priority date for the environmental flow standards and set-asides established by this subchapter is March 1, 2011. The priority date for the environmental flow standards will be used in the water availability determination for a new appropriation or for an amendment to an existing water right that increases the amount of water authorized to be stored, taken, or diverted, and has no other purpose.

§298.320. Calculation of Hydrologic Conditions.

(a) For new water right authorizations which increase the amount of water authorized to be stored, taken, or diverted as described in §298.10 of this title (relating to Applicability), the determination of the hydrologic condition for a particular season shall be determined once per season. The conditions present on the last day of the month of the preceding season will determine the hydrologic condition for the following season. For each measurement point specified in this section, either cumulative streamflow for the previous 12 months, combined storage in major reservoirs, or reservoir elevation will determine the hydrologic condition, as described in subsections §298.320(b) - (d) of this section.

(b) For measurement points located on the Colorado River above Lake Travis and tributaries of the Colorado River, and in the Colorado-Lavaca and the Lavaca-Guadalupe Coastal Basins, cumulative streamflow for the preceding 12 months and the corresponding hydrologic conditions are:

Figure: 30 TAC §298.320(b)

Cumulative Streamflow for Calculating Hydrologic Conditions for Measurement Points on the Colorado River above Lake Travis and tributaries of the Colorado River, and in the Colorado-Lavaca and the Lavaca-Guadalupe Coastal Basins

		Cumulative Streamflow (acre-feet)			
BASIN	MEASUREMENT POINT	SEVERE	DRY	AVERAGE	WET
COLORADO	Colorado River above Silver	less than 4,090	4,090 - 16,600	16,600 - 57,490	greater than 57,490
COLORADO	Colorado River near Ballinger	less than 3,120	3,120 - 11,150	11,150 - 67,700	greater than 67,700
COLORADO	Elm Creek at Ballinger	less than 820	820 - 4,990	4,990 - 46,560	greater than 46,560
COLORADO	South Concho River at Christoval	less than 5,270	5,270 - 7,380	7,380 - 21,660	greater than 21,660
COLORADO	Concho River at Paint Rock	less than 7,110	7,110 - 17,000	17,000 - 49,900	greater than 49,900
COLORADO	Pecan Bayou near Mullin	less than 11,860	11,860 - 26,700	26,700 - 187,740	greater than 187,740
COLORADO	San Saba River at San Saba	less than 40,550	40,550 - 61,100	61,100 - 149,890	greater than 149,890
COLORADO	Colorado River near San Saba	less than 80,510	80,510 - 205,110	205,110 - 568,970	greater than 568,970
COLORADO	Llano River at Llano	less than 90,810	90,810 - 145,660	145,660 - 364,540	greater than 364,540

COLORADO	Pedernales River near Johnson City	less than 27,710	27,710 - 70,210	70,210 - 222,700	greater than 222,700
COLORADO	Onion Creek near Driftwood	less than 810	810 - 10,460	10,460 - 59,610	greater than 59,610
COLORADO-LAVACA	Tres Palacios Creek near Midfield	less than 31,940	31,940 - 62,920	62,920 - 158,630	greater than 158,630
LAVACA-GUADALUPE	Garcitas Creek near Inez	less than 1,880	1,880 - 10,790	10,790 - 62,460	greater than 62,460

(c) For measurement points located on the Colorado River below Lake Travis, the combined reservoir storage in Lakes Travis and Buchanan and the corresponding hydrologic conditions are:

Figure: 30 TAC §298.320(c)

Combined Reservoir Storage for Calculating Hydrologic Conditions for Measurement Points on the Colorado River below Lake Travis

		Combined Reservoir Storage in Lakes Travis and Buchanan (acre-feet)		
BASIN	MEASUREMENT POINTS	SEVERE	DRY	AVERAGE
COLORADO	Colorado River at Bastrop, Colorado River at Columbus, Colorado River at Wharton	less than 1,103,700	1,103,700 - 1,737,460	greater than 1,737,460

(d) For measurement points located in the Lavaca River Basin, the reservoir elevation of Lake Texana and the corresponding hydrologic conditions are:

Figure: 30 TAC §298.320(d)

Reservoir Elevation for Calculating Hydrologic Conditions for Measurement Points in the Lavaca River Basin

		Reservoir Elevation of Lake Texana (msl)			
BASIN	MEASUREMENT POINTS	SEVERE	DRY	AVERAGE	WET
LAVACA	West Mustang Creek near Ganado, East Mustang Creek near Louise, Navidad River near Edna, Sandy Creek near Ganado, Lavaca River near Edna	less than 39.95	39.95 - 43.00	43.00 - 44.00	greater than 44.00

msl = mean sea level

(e) For purposes of water availability determinations, for measurement points on the Colorado River above Lake Travis and tributaries of the Colorado River, and in the Lavaca River Basin and the Colorado-Lavaca and Lavaca-Guadalupe Coastal Basins, hydrologic conditions used in the commission's water availability models shall be calculated such that severe conditions occur approximately 5% of the time, dry conditions occur approximately 20% of the time, average conditions occur approximately 50% of the time, and wet conditions occur approximately 25% of the time.

(f) For purposes of water availability determinations, for measurement points on the Colorado River below Lake Travis, hydrologic conditions used in the commission's water availability models shall be calculated such that severe conditions occur approximately 5% of the time, dry conditions occur approximately 45% of the time, and average conditions occur approximately 50% of the time.

(g) The hydrologic condition indicators set out in subections (b) - (d) of this section govern the operations of permits subject to this subchapter during the initial period, of not longer than ten years, until the environmental flow standards in this subchapter are reevaluated. Those indicators were calculated to achieve compliance with the percentages of time stated in subsections (e) and (f) of this section. The hydrologic condition indicators set out in subsections (b) - (d) of this section will be recalculated, no less frequently than once every ten years, in order to achieve, to the greatest extent possible, compliance with the percentages of time stated in subsections (e) and (f) of this section.

§298.325. Schedule of Flow Quantities.

(a) Schedule of flow quantities. The environmental flow standards adopted by this subchapter constitute a schedule of flow quantities made up of subsistence flow,

base flow, and high flow pulses. Environmental flow standards are established at 21 separate measurement locations in §298.330 of this title (relating to Environmental Flow Standards).

(b) Subsistence flow. The applicable subsistence flow standard varies depending on the seasons as described in §298.305 of this title (relating to Definitions). For a water right holder to which an environmental flow standard applies, at a measurement point that applies to the water right, the water right holder may not store or divert water under severe hydrologic conditions, unless the flow at the measurement point is above the applicable subsistence flow standard for that point. During severe hydrologic conditions, if the flow at the measurement point is above the subsistence flow standard but below the applicable dry condition base flow standard, then the water right holder may divert or store water according to its permit, subject to senior and superior water rights, as long as the flow at the measurement point does not fall below the applicable subsistence flow standard.

(c) Base flow. The applicable base flow level varies depending on the seasons as described in §298.305 of this title and the hydrologic condition described in §298.320 of this title (relating to Calculation of Hydrologic Conditions). For a water right holder to which an environmental flow standard applies, at a measurement point that applies to the water right, the water right holder is subject to the base flow standard for the

hydrologic condition prevailing at that time. For all measurement points except those on the Colorado River below Lake Travis, the water right will be subject to one of the following: a dry, an average, or a wet base flow standard. For all measurement points on the Colorado River below Lake Travis, the water right will be subject to either a dry or an average base flow standard. For all measurement points, the dry base flow standard applies during severe hydrologic conditions. For a water right holder to which an environmental flow standard applies, at a measurement point that applies to the water right, when the flow at the applicable measurement point is above the applicable base flow standard, but below any applicable high flow pulse levels, the water right holder may store or divert water according to its permit, subject to senior and superior water rights, as long as the flow at the applicable measurement point does not fall below the applicable base flow standard for that hydrologic condition.

(d) High flow pulses. High flow pulses are relatively short-duration, high flows within the watercourse that occur during or immediately following a storm event.

(1) For measurement points on the Colorado River below Lake Travis, two pulses per season, one pulse per 18 months, and one pulse per two years are to be passed (i.e., no storage or diversion by an applicable water right holder), if applicable, and as described in §298.330 of this title, if streamflows are above the applicable subsistence or base flow standard, and if the applicable high flow pulse trigger level is met at the

applicable measurement point. The water right holder shall not divert or store water until the daily average flow at the applicable measurement point equals at least the high flow pulse trigger level on consecutive days equaling the duration time except during times that streamflow at the applicable measurement point exceeds the applicable high flow pulse trigger level.

(2) For measurement points on the Colorado River above Lake Travis, tributaries of the Colorado River, and in the Lavaca River Basin and the Colorado-Lavaca and Lavaca-Guadalupe Coastal Basins, one or two pulses per season and one pulse per year are to be passed (i.e., no storage or diversion by an applicable water right holder), if applicable, and as described in §298.330 of this title, if streamflows are above the applicable subsistence or base flow standard, and if the applicable high flow pulse trigger level is met at the applicable measurement point. The water right holder shall not divert or store water until either the applicable volume amount has passed the applicable measurement point or the duration time has passed since the high flow pulse trigger level occurred except during times that streamflow at the applicable measurement point exceeds the applicable high flow pulse trigger level.

(3) If the applicable high flow pulse trigger level does not occur in a season, then the water right holder need not stop storing or diverting water to produce a

high flow pulse. The water right holder is not required to release water lawfully stored to produce a high flow pulse.

(4) Each season is independent of the preceding and subsequent seasons with respect to high flow pulse frequency.

(5) High flow pulses are independent of the hydrologic conditions set out in §298.320 of this title.

(6) If a high flow pulse requirement for a one-per-season pulse is satisfied for a particular season, one of the two-per-season pulse requirements is also considered to be satisfied. When a pulse flow requirement for an annual pulse is satisfied in a particular season, the one-per-season pulse requirement and one of the two-per-season pulse requirements are also considered to be satisfied.

(e) Stored water. A water right owner that has stored water in accordance with the terms and conditions of its water right, including any applicable environmental flow requirement in effect at the time the water was stored, may divert, release, or use this water, even if the applicable environmental flow requirement is not met at the time of the subsequent diversion, release, or use of that stored water.

§298.330. Environmental Flow Standards.

(a) A water right application in the Colorado River Basin which increases the amount of water authorized to be stored, taken or diverted as described in §298.10 of this title (relating to Applicability) shall not cause or contribute to an impairment of the inflow regimes as described in the figure in this subsection. Impairment of the inflow regime shall be evaluated as part of the water availability determination for a new water right or amendment that is subject to this subchapter. For purposes of this subsection, impairment would occur if the application, when considered in combination with any authorizations subject to this subchapter, which were issued prior to this application, would:

(1) decrease the annual average freshwater inflow, at the most downstream point in the Colorado River Basin, below 60% of the long-term annual strategy quantity listed in Figure: 30 TAC §298.330(a)(2);

(2) decrease the modeled annual frequency of any inflow regime; or, .

Figure: 30 TAC §298.330(a)(2)

Bay and Estuary Freshwater Inflow Standards for Matagorda Bay Inflows from the Colorado River Basin

Inflow Regime	Monthly Minimum Quantity (af)	Spring Season Quantity (af)	Fall Season Quantity (af)	Intervening Season Quantity (af)	Long-Term Annual Strategy Quantity (af)	Annual Strategy Frequency
Monthly ~~Strategy~~ Threshold Inflow	15,000	N/A	N/A	N/A	N/A	100%
Level 1	N/A	114,000	81,000	105,000	N/A	90%
Level 2	N/A	168,700	119,900	155,400	N/A	75%
Level 3	N/A	246,200	175,000	226,800	N/A	60%
Level 4	N/A	433,200	307,800	399,000	N/A	35%
Annual Average	N/A	N/A	N/A	N/A	1,400,000	N/A

af = acre-feet
N/A = not applicable

(3) decrease the monthly inflow quantity to Matagorda Bay below 15,000 acre-feet per month.

(b) To the extent that strategies are implemented through a water right permit or amendment to help meet the freshwater inflow standards for Matagorda Bay, a water right application in the Colorado River Basin which increases the amount of water authorized to be stored, taken, or diverted as described in §298.10 of this title shall not reduce the long-term annual strategy quantity, ~~or~~ the modeled annual frequency, or the monthly threshold inflow for any inflow regime level listed in Figure: 30 TAC §298.330(a)(2) below the long term annual strategy quantity, ~~or~~ modeled annual

frequency, or the monthly threshold inflow that would occur in the commission's water availability model with the permitted strategy or strategies in place.

(c) A water right application in the Lavaca River basin, or Garcitas Creek located in the Lavaca-Guadalupe Coastal Basin, which increases the amount of water authorized to be stored, taken or diverted as described in §298.10 of this title, shall not cause or contribute to an impairment of the inflow regimes as described in the figure in this subsection. Impairment of the inflow regime shall be evaluated as part of the water availability determination for a new water right or amendment that is subject to this subchapter. For purposes of this subsection, impairment would occur if the application, when considered in combination with any prior authorizations subject to this subchapter, would decrease the modeled annual frequency of any inflow regime level.

Figure: 30 TAC §298.330(c)

Bay and Estuary Freshwater Inflow Standards for the Lavaca Bay System

Inflow Regime	**Spring Inflow Quantity (af)**	**Fall Inflow Quantity (af)**	**Intervening Inflow Quantity (af)**	**Annual Strategy Frequency**
Subsistence	13,500	9,600	6,900	96%
Base Dry	55,080	39,168	28,152	82%
Base Average	127,980	91,080	65,412	46%
Base Wet	223,650	158,976	114,264	28%

af=acre feet

(d) To the extent that strategies are implemented through a water right permit or amendment to help meet the freshwater inflow standards for Lavaca Bay, a water right application in the Lavaca River Basin, or on Garcitas Creek in the Lavaca-Guadalupe Coastal Basin, which increases the amount of water authorized to be stored, taken, or diverted as described in §298.10 of this title, shall not reduce the modeled annual frequency in the commission's water availability model for any inflow regime level described ~~listed~~ in Figure: 30 TAC §298.330(c) below the frequency ~~level~~ that would occur with the permitted strategy or strategies in place.

(e) The following environmental flow standards are established for the following described measurement points:

(1) Colorado River above Silver, Texas, generally described as United States Geological Survey (USGS) gage 08123850, and more specifically described as Latitude 32 degrees, 03 minutes, 13 seconds; Longitude 100 degrees, 45 minutes, 42 seconds.

Figure: 30 TAC §298.330(e)(1)

United States Geological Survey Gage 08123850, Colorado River above Silver

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per**	**Large Seasonal Pulse (1 per**	**Annual Pulse**

				season)	**season)**	
Winter	Severe	1 cfs	2 cfs	Trigger: 18 cfs Volume: 120 af Duration: 13 days	Trigger: 42 cfs Volume: 300 af Duration: 15 days	Trigger: 3,000 cfs Volume: 13,600 af Duration: 17 days
Winter	Dry	N/A	2 cfs			
Winter	Average	N/A	4 cfs			
Winter	Wet	N/A	7 cfs			
Spring	Severe	1 cfs	2 cfs	Trigger: 600 cfs Volume: 2,500 af Duration: 9 days	Trigger: 1,800 cfs Volume: 7,900 af Duration: 11 days	
Spring	Dry	N/A	2 cfs			
Spring	Average	N/A	5 cfs			
Spring	Wet	N/A	12 cfs			
Summer	Severe	1 cfs	1 cfs	Trigger: 100 cfs Volume: 350 af Duration: 6 days	Trigger: 330 cfs Volume: 1,400 af Duration: 9 days	
Summer	Dry	N/A	1 cfs			
Summer	Average	N/A	3 cfs			
Summer	Wet	N/A	8 cfs			
Fall	Severe	1 cfs	1 cfs	Trigger: 100 cfs Volume: 400 af Duration: 6 days	Trigger: 430 cfs Volume: 1,800 af Duration: 9 days	
Fall	Dry	N/A	1 cfs			
Fall	Average	N/A	4 cfs			
Fall	Wet	N/A	10 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

(2) Colorado River near Ballinger, Texas, generally described as USGS gage 08126380, and more specifically described as Latitude 31 degrees, 42 minutes, 55 seconds; Longitude 100 degrees, 01 minutes, 34 seconds.

Figure: 30 TAC §298.330(e)(2)

United States Geological Survey Gage 08126380, Colorado River near Ballinger

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**	**Annual Pulse**
Winter	Severe	1 cfs	4 cfs	Trigger: 27 cfs Volume: 180 af Duration: 11 days	Trigger: 96 cfs Volume: 660 af Duration: 17 days	Trigger: 3,200 cfs Volume: 13,700 af Duration: 10 days
Winter	Dry	N/A	4 cfs			
Winter	Average	N/A	9 cfs			
Winter	Wet	N/A	14 cfs			
Spring	Severe	1 cfs	3 cfs	Trigger: 1,300 cfs Volume: 5,300 af Duration: 9 days	Trigger: 3,200 cfs Volume: 13,700 af Duration: 10 days	
Spring	Dry	N/A	3 cfs			
Spring	Average	N/A	9 cfs			
Spring	Wet	N/A	19 cfs			
Summer	Severe	1 cfs	2 cfs	Trigger: 130 cfs Volume: 490 af Duration: 6 days	Trigger: 630 cfs Volume: 2,600 af Duration: 9 days	
Summer	Dry	N/A	2 cfs			
Summer	Average	N/A	6 cfs			
Summer	Wet	N/A	14 cfs			
Fall	Severe	1 cfs	4 cfs	Trigger: 250 cfs Volume: 950 af Duration: 8 days	Trigger: 1,500 cfs Volume: 5,700 af Duration: 10 days	
Fall	Dry	N/A	4 cfs			
Fall	Average	N/A	9 cfs			
Fall	Wet	N/A	17 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

(3) Colorado River near San Saba, Texas, generally described as USGS gage 08147000, and more specifically described as Latitude 31 degrees, 13 minutes, 04 seconds; Longitude 98 degrees, 33 minutes, 51 seconds.

Figure: 30 TAC §298.330(e)(3)

United States Geological Survey Gage 08147000, Colorado River near San Saba

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**	**Annual Pulse**
Winter	Severe	50 cfs	95 cfs	Trigger: 520 cfs Volume: 3,100 af Duration: 9 days	Trigger: 1,600 cfs Volume: 11,100 af Duration: 15 days	Trigger: 18,900 cfs Volume: 129,100 af Duration: 23 days
Winter	Dry	N/A	95 cfs			
Winter	Average	N/A	150 cfs			
Winter	Wet	N/A	210 cfs			
Spring	Severe	50 cfs	120 cfs	Trigger: 5,800 cfs Volume: 31,300 af Duration: 9 days	Trigger: 11,000 cfs Volume: 70,200 af Duration: 13 days	
Spring	Dry	N/A	120 cfs			
Spring	Average	N/A	190 cfs			
Spring	Wet	N/A	360 cfs			
Summer	Severe	30 cfs	72 cfs	Trigger: 510 cfs Volume: 1,900 af Duration: 4 days	Trigger: 1,400 cfs Volume: 6,500 af Duration: 7 days	
Summer	Dry	N/A	72 cfs			
Summer	Average	N/A	120 cfs			
Summer	Wet	N/A	210 cfs			
Fall	Severe	30 cfs	95 cfs	Trigger: 890 cfs Volume: 3,500 af Duration:	Trigger: 3,800 cfs Volume: 19,200 af Duration:	
Fall	Dry	N/A	95 cfs			
Fall	Average	N/A	150 cfs			

Fall	Wet	N/A	210 cfs	6 days	12 days	

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

(4) Elm Creek at Ballinger, Texas, generally described as USGS gage 08127000, and more specifically described as Latitude 31 degrees, 44 minutes, 57 seconds; Longitude 99 degrees, 56 minutes, 51 seconds.

Figure: 30 TAC §298.330(e)(4)

United States Geological Survey Gage 08127000, Elm Creek at Ballinger

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**	**Annual Pulse**
Winter	Severe	1 cfs	1 cfs	Trigger: 10 cfs Volume: 71 af Duration: 10 days	Trigger: 40 cfs Volume: 270 af Duration: 1 day	Trigger: 1,900 cfs Volume: 7,200 af Duration: 18 days
Winter	Dry	N/A	1 cfs			
Winter	Average	N/A	1 cfs			
Winter	Wet	N/A	4 cfs			
Spring	Severe	1 cfs	1 cfs	Trigger: 380 cfs Volume: 1,400 af Duration: 10 days	Trigger: 1,000 cfs Volume: 3,800 af Duration: 12 days	
Spring	Dry	N/A	1 cfs			
Spring	Average	N/A	1 cfs			
Spring	Wet	N/A	5 cfs			
Summer	Severe	1 cfs	1 cfs	Trigger: 6 cfs Volume: 25 af Duration:	Trigger: 74 cfs Volume: 300 af Duration:	
Summer	Dry	N/A	1 cfs			
Summer	Average	N/A	1 cfs			

Summer	Wet	N/A	1 cfs	6 days	9 days	
Fall	Severe	1 cfs	1 cfs	Trigger: 10 cfs Volume: 46 af Duration: 9 days	Trigger: 190 cfs Volume: 850 af Duration: 15 days	
Fall	Dry	N/A	1 cfs			
Fall	Average	N/A	1 cfs			
Fall	Wet	N/A	1 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

(5) Concho River at Paint Rock, Texas, generally described as USGS gage 08136500, and more specifically described as Latitude 31 degrees, 30 minutes, 57 seconds; Longitude 99 degrees, 55 minutes, 09 seconds.

Figure: 30 TAC §298.330(e)(5)

United States Geological Survey Gage 08136500, Concho River at Paint Rock

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**	**Annual Pulse**
Winter	Severe	1 cfs	8 cfs	Trigger: 61 cfs Volume: 400 af Duration: 10 days	Trigger: 160 cfs Volume: 1,200 af Duration: 16 days	Trigger: 3,000 cfs Volume: 13,500 af Duration: 19 days
Winter	Dry	N/A	8 cfs			
Winter	Average	N/A	20 cfs			
Winter	Wet	N/A	36 cfs			
Spring	Severe	1 cfs	4 cfs	Trigger: 500 cfs Volume: 2,000 af Duration: 8 days	Trigger: 1,400 cfs Volume: 5,700 af Duration: 11 days	
Spring	Dry	N/A	4 cfs			
Spring	Average	N/A	14 cfs			
Spring	Wet	N/A	27 cfs			

Summer	Severe	1 cfs	1 cfs	Trigger: 32 cfs Volume: 140 af Duration: 6 days	Trigger: 110 cfs Volume: 520 af Duration: 8 days	
Summer	Dry	N/A	1 cfs			
Summer	Average	N/A	4 cfs			
Summer	Wet	N/A	12 cfs			
Fall	Severe	1 cfs	5 cfs	Trigger: 74 cfs Volume: 330 af Duration: 7 days	Trigger: 300 cfs Volume: 1,300 af Duration: 10 days	
Fall	Dry	N/A	5 cfs			
Fall	Average	N/A	16 cfs			
Fall	Wet	N/A	29 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

(6) South Concho River at Christoval, Texas, generally described as USGS gage 08128000, and more specifically described as Latitude 31 degrees, 11 minutes, 13 seconds; Longitude 100 degrees, 30 minutes, 06 seconds.

Figure: 30 TAC §298.330(e)(6)

United States Geological Survey Gage 08128000, South Concho River at Christoval

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**	**Annual Pulse**
Winter	Severe	2 cfs	9 cfs	N/A	N/A	Trigger: 420 cfs Volume: 1,400 af Duration: 9 days
Winter	Dry	N/A	9 cfs			
Winter	Average	N/A	15 cfs			
Winter	Wet	N/A	22 cfs			

Spring	Severe	3 cfs	9 cfs	N/A	N/A	
Spring	Dry	N/A	9 cfs			
Spring	Average	N/A	15 cfs			
Spring	Wet	N/A	22 cfs			
Summer	Severe	2 cfs	7 cfs	N/A	N/A	
Summer	Dry	N/A	7 cfs			
Summer	Average	N/A	12 cfs			
Summer	Wet	N/A	22 cfs			
Fall	Severe	2 cfs	7 cfs	N/A	Trigger: 45 cfs Volume: 190 af Duration: 7 days	
Fall	Dry	N/A	7 cfs			
Fall	Average	N/A	12 cfs			
Fall	Wet	N/A	22 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

(7) Pecan Bayou near Mullin, Texas, generally described as USGS gage 08143600, and more specifically described as Latitude 31 degrees, 31 minutes, 02 seconds; Longitude 98 degrees, 44 minutes, 25 seconds.

Figure: 30 TAC §298.330(e)(7)

United States Geological Survey Gage 08143600, Pecan Bayou near Mullin

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**	**Annual Pulse**

Winter	Severe	1 cfs	3 cfs	Trigger: 52 cfs Volume: 230 af Duration: 7 days	Trigger: 250 cfs Volume: 1,500 af Duration: 14 days	Trigger: 3,500 cfs Volume: 25,800 af Duration: 26 days
Winter	Dry	N/A	3 cfs			
Winter	Average	N/A	7 cfs			
Winter	Wet	N/A	12 cfs			
Spring	Severe	1 cfs	3 cfs	Trigger: 710 cfs Volume: 3,600 af Duration: 10 days	Trigger: 2,100 cfs Volume: 13,200 af Duration: 17 days	
Spring	Dry	N/A	3 cfs			
Spring	Average	N/A	9 cfs			
Spring	Wet	N/A	19 cfs			
Summer	Severe	1 cfs	2 cfs	Trigger: 21 cfs Volume: 73 af Duration: 4 days	Trigger: 100 cfs Volume: 440 af Duration: 7 days	
Summer	Dry	N/A	2 cfs			
Summer	Average	N/A	4 cfs			
Summer	Wet	N/A	8 cfs			
Fall	Severe	1 cfs	3 cfs	Trigger: 36 cfs Volume: 110 af Duration: 3 days	Trigger: 250 cfs Volume: 1,200 af Duration: 9 days	
Fall	Dry	N/A	3 cfs			
Fall	Average	N/A	7 cfs			
Fall	Wet	N/A	12 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

(8) San Saba River at San Saba, Texas, generally described as USGS gage 08146000, and more specifically described as Latitude 31 degrees, 12 minutes, 47 seconds; Longitude 98 degrees, 43 minutes, 09 seconds.

Figure: 30 TAC §298.330(e)(8)

United States Geological Survey Gage 08146000, San Saba River at San Saba

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**	**Annual Pulse**
Winter	Severe	29 cfs	56 cfs	Trigger: 150 cfs Volume: 980 af Duration: 14 days	Trigger: 330 cfs Volume: 2,300 af Duration: 18 days	Trigger: 5,500 cfs Volume: 27,400 af Duration: 21 days
Winter	Dry	N/A	56 cfs			
Winter	Average	N/A	81 cfs			
Winter	Wet	N/A	110 cfs			
Spring	Severe	22 cfs	56 cfs	Trigger: 810 cfs Volume: 3,600 af Duration: 9 days	Trigger: 2,000 cfs Volume: 9,200 af Duration: 12 days	
Spring	Dry	N/A	56 cfs			
Spring	Average	N/A	81 cfs			
Spring	Wet	N/A	110 cfs			
Summer	Severe	3 cfs	32 cfs	N/A	Trigger: 210 cfs Volume: 1,100 af Duration: 9 days	
Summer	Dry	N/A	32 cfs			
Summer	Average	N/A	46 cfs			
Summer	Wet	N/A	62 cfs			
Fall	Severe	13 cfs	40 cfs	Trigger: 150 cfs Volume: 600 af Duration: 8 days	Trigger: 500 cfs Volume: 2,300 af Duration: 12 days	
Fall	Dry	N/A	40 cfs			
Fall	Average	N/A	64 cfs			
Fall	Wet	N/A	87 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

(9) Llano River at Llano, Texas, generally described as USGS gage 08151500, and more specifically described as Latitude 30 degrees, 45 minutes, 04 seconds; Longitude 98 degrees, 40 minutes, 10 seconds.

Figure: 30 TAC §298.330(e)(9)

United States Geological Survey Gage 08151500, Llano River at Llano

<table>
<tr><th>Season</th><th>Hydrologic Condition</th><th>Subsistence</th><th>Base</th><th>Small Seasonal Pulse (2 per season)</th><th>Large Seasonal Pulse (1 per season)</th><th>Annual Pulse</th></tr>
<tr><td>Winter</td><td>Severe</td><td>44 cfs</td><td>100 cfs</td><td rowspan="4">Trigger: 390 cfs Volume: 2,500 af Duration: 13 days</td><td rowspan="4">Trigger: 1,100 cfs Volume: 6,800 af Duration: 16 days</td><td rowspan="12">Trigger: 9,100 cfs Volume: 46,100 af Duration: 18 days</td></tr>
<tr><td>Winter</td><td>Dry</td><td>N/A</td><td>100 cfs</td></tr>
<tr><td>Winter</td><td>Average</td><td>N/A</td><td>150 cfs</td></tr>
<tr><td>Winter</td><td>Wet</td><td>N/A</td><td>190 cfs</td></tr>
<tr><td>Spring</td><td>Severe</td><td>35 cfs</td><td>100 cfs</td><td rowspan="4">Trigger: 1,800 cfs Volume: 8,500 af Duration: 10 days</td><td rowspan="4">Trigger: 4,800 cfs Volume: 23,200 af Duration: 13 days</td></tr>
<tr><td>Spring</td><td>Dry</td><td>N/A</td><td>100 cfs</td></tr>
<tr><td>Spring</td><td>Average</td><td>N/A</td><td>150 cfs</td></tr>
<tr><td>Spring</td><td>Wet</td><td>N/A</td><td>190 cfs</td></tr>
<tr><td>Summer</td><td>Severe</td><td>3 cfs</td><td>67 cfs</td><td rowspan="4">N/A</td><td rowspan="4">Trigger: 560 cfs Volume: 2,600 af Duration: 9 days</td></tr>
<tr><td>Summer</td><td>Dry</td><td>N/A</td><td>67 cfs</td></tr>
<tr><td>Summer</td><td>Average</td><td>N/A</td><td>92 cfs</td></tr>
<tr><td>Summer</td><td>Wet</td><td>N/A</td><td>130 cfs</td></tr>
<tr><td>Fall</td><td>Severe</td><td>20 cfs</td><td>87 cfs</td><td rowspan="4">Trigger: 370 cfs Volume: 1,600 af Duration: 8 days</td><td rowspan="4">Trigger: 1,400 cfs Volume: 6,300 af Duration: 11 days</td></tr>
<tr><td>Fall</td><td>Dry</td><td>N/A</td><td>87 cfs</td></tr>
<tr><td>Fall</td><td>Average</td><td>N/A</td><td>120 cfs</td></tr>
<tr><td>Fall</td><td>Wet</td><td>N/A</td><td>190 cfs</td></tr>
</table>

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

(10) Pedernales River near Johnson City, Texas, generally described as USGS gage 08153500, and more specifically described as Latitude 30 degrees, 17 minutes, 30 seconds; Longitude 98 degrees, 23 minutes, 57 seconds.

Figure: 30 TAC §298.330(e)(10)

United States Geological Survey Gage 08153500, Pedernales River near Johnson City

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**	**Annual Pulse**
Winter	Severe	7 cfs	23 cfs	Trigger: 270 cfs Volume: 1,300 af Duration: 9 days	Trigger: 860 cfs Volume: 4,700 af Duration: 15 days	Trigger: 6,980 cfs Volume: 28,320 af Duration: 15 days
Winter	Dry	N/A	23 cfs			
Winter	Average	N/A	45 cfs			
Winter	Wet	N/A	80 cfs			
Spring	Severe	4 cfs	29 cfs	Trigger: 1,700 cfs Volume: 6,300 af Duration: 8 days	Trigger: 3,700 cfs Volume: 14,400 af Duration: 10 days	
Spring	Dry	N/A	29 cfs			
Spring	Average	N/A	60 cfs			
Spring	Wet	N/A	110 cfs			
Summer	Severe	1 cfs	16 cfs	N/A	Trigger: 290 cfs Volume: 1,100 af Duration: 7 days	
Summer	Dry	N/A	16 cfs			
Summer	Average	N/A	29 cfs			
Summer	Wet	N/A	49 cfs			
Fall	Severe	1 cfs	16 cfs	Trigger: 160 cfs Volume: 620 af Duration:	Trigger: 860 cfs Volume: 3,000 af Duration:	
Fall	Dry	N/A	16 cfs			
Fall	Average	N/A	29 cfs			

Fall	Wet	N/A	49 cfs	6 days	8 days	

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

(11) Onion Creek near Driftwood, Texas, generally described as USGS gage 08158700, and more specifically described as Latitude 30 degrees, 04 minutes, 58 seconds; Longitude 98 degrees, 00 minutes, 27 seconds.

Figure: 30 TAC §298.330(e)(11)

United States Geological Survey Gage 08158700, Onion Creek near Driftwood

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**	**Annual Pulse**
Winter	Severe	1 cfs	2 cfs	N/A	Trigger: 170 cfs Volume: 1,900 af Duration: 20 days	Trigger: 1,200 cfs Volume: 8,700 af Duration: 34 days
Winter	Dry	N/A	2 cfs			
Winter	Average	N/A	6 cfs			
Winter	Wet	N/A	26 cfs			
Spring	Severe	1 cfs	4 cfs	Trigger: 200 cfs Volume: 1,100 af Duration: 11 days	Trigger: 620 cfs Volume: 3,700 af Duration: 19 days	
Spring	Dry	N/A	4 cfs			
Spring	Average	N/A	12 cfs			
Spring	Wet	N/A	34 cfs			
Summer	Severe	1 cfs	1 cfs	N/A	N/A	
Summer	Dry	N/A	1 cfs			
Summer	Average	N/A	3 cfs			

Summer	Wet	N/A	7 cfs			
Fall	Severe	1 cfs	1 cfs	Trigger: 18 cfs Volume: 70 af Duration: 5 days	Trigger: 120 cfs Volume: 560 af Duration: 11 days	
Fall	Dry	N/A	1 cfs			
Fall	Average	N/A	3 cfs			
Fall	Wet	N/A	7 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

(12) Colorado River at Bastrop, Texas, generally described as USGS gage 08159200, and more specifically described as Latitude 30 degrees, 06 minutes, 16 seconds; Longitude 97 degrees, 19 minutes, 09 seconds.

(A) United States Geological Survey Gage 08159200, Colorado River at Bastrop.

Figure: 30 TAC §298.330(e)(12)(A)

United States Geological Survey Gage 08159200, Colorado River at Bastrop

Season	**Month**	**Hydrologic Condition**	**Subsistence**	**Base**	**Seasonal Pulse (2 per season)**
Winter	December	Severe	186 cfs	311 cfs	Magnitude: 3,000 cfs Duration: 4 days
	December	Dry	N/A	311 cfs	
	December	Average	N/A	450 cfs	
	January	Severe	208 cfs	313 cfs	
	January	Dry	N/A	313 cfs	
	January	Average	N/A	433 cfs	
	February	Severe	274	317 cfs	

	February	Dry	N/A	317 cfs	
	February	Average	N/A	497 cfs	
Spring	March	Severe	274 cfs	274 cfs	Magnitude: 3,000 cfs Duration: 4 days
	March	Dry	N/A	274 cfs	
	March	Average	N/A	497 cfs	
	April	Severe	184 cfs	287 cfs	
	April	Dry	N/A	287 cfs	
	April	Average	N/A	635 cfs	
	May	Severe	275 cfs	579 cfs	
	May	Dry	N/A	579 cfs	
	May	Average	N/A	824 cfs	
	June	Severe	202 cfs	418 cfs	
	June	Dry	N/A	418 cfs	
	June	Average	N/A	733 cfs	
Summer	July	Severe	137 cfs	347 cfs	Magnitude: 3,000 cfs Duration: 4 days
	July	Dry	N/A	347 cfs	
	July	Average	N/A	610 cfs	
	August	Severe	123 cfs	194 cfs	
	August	Dry	N/A	194 cfs	
	August	Average	N/A	381 cfs	
Fall	September	Severe	123 cfs	236 cfs	Magnitude: 3,000 cfs Duration: 4 days
	September	Dry	N/A	236 cfs	
	September	Average	N/A	423 cfs	
	October	Severe	127 cfs	245 cfs	
	October	Dry	N/A	245 cfs	
	October	Average	N/A	433 cfs	
	November	Severe	180 cfs	283 cfs	
	November	Dry	N/A	283 cfs	
	November	Average	N/A	424 cfs	

cfs = cubic feet per second
N/A = not applicable

(B) United States Geological Survey Gage 08159200, Colorado River at Bastrop.

Figure: 30 TAC §298.330(e)(12)(B)

United States Geological Survey Gage 08159200, Colorado River at Bastrop

Pulse Frequency	**Pulse Magnitude**	**Pulse Duration**
1 per 18 months	8,000 cfs	2 days

cfs = cubic feet per second

(13) Colorado River at Columbus, Texas, generally described as USGS gage 08161000, and more specifically described as Latitude 29 degrees, 42 minutes, 22 seconds; Longitude 96 degrees, 32 minutes, 12 seconds.

(A) United States Geological Survey Gage 08161000, Colorado River at Columbus.

Figure: 30 TAC §298.330(e)(13)(A)

United States Geological Survey Gage 08161000, Colorado River at Columbus

Season	**Month**	**Hydrologic Condition**	**Subsistence**	**Base**	**Seasonal Pulse (2 per season)**
Winter	December	Severe	301 cfs	464 cfs	Magnitude: 3,000 cfs
	December	Dry	N/A	464 cfs	

	December	Average	N/A	737 cfs	Duration: 4 days
	January	Severe	340 cfs	487 cfs	
	January	Dry	N/A	487 cfs	
	January	Average	N/A	828 cfs	
	February	Severe	375	590 cfs	
	February	Dry	N/A	590 cfs	
	February	Average	N/A	895 cfs	
Spring	March	Severe	375 cfs	525 cfs	Magnitude: 3,000 cfs Duration: 4 days
	March	Dry	N/A	525 cfs	
	March	Average	N/A	1,020 cfs	
	April	Severe	299 cfs	554 cfs	
	April	Dry	N/A	554 cfs	
	April	Average	N/A	977 cfs	
	May	Severe	425 cfs	966 cfs	
	May	Dry	N/A	966 cfs	
	May	Average	N/A	1,316 cfs	
	June	Severe	534 cfs	967 cfs	
	June	Dry	N/A	967 cfs	
	June	Average	N/A	1,440 cfs	
Summer	July	Severe	342 cfs	570 cfs	Magnitude: 3,000 cfs Duration: 4 days
	July	Dry	N/A	570 cfs	
	July	Average	N/A	895 cfs	
	August	Severe	190 cfs	310 cfs	
	August	Dry	N/A	310 cfs	
	August	Average	N/A	516 cfs	
Fall	September	Severe	279 cfs	405 cfs	Magnitude: 3,000 cfs Duration: 4 days
	September	Dry	N/A	405 cfs	
	September	Average	N/A	610 cfs	
	October	Severe	190 cfs	356 cfs	
	October	Dry	N/A	356 cfs	
	October	Average	N/A	741 cfs	
	November	Severe	202 cfs	480 cfs	
	November	Dry	N/A	480 cfs	
	November	Average	N/A	755 cfs	

cfs = cubic feet per second
N/A = not applicable

(B) United States Geological Survey Gage 08161000, Colorado River at Columbus.

Figure: 30 TAC §298.330(e)(13)(B)

United States Geological Survey Gage 08161000, Colorado River at Columbus

Pulse Frequency	**Pulse Magnitude**	**Pulse Duration**
1 per 18 months	8,000 cfs	2 days
1 per 2 years	27,000 cfs	2 days

cfs = cubic feet per second

(14) Colorado River at Wharton, Texas, generally described as USGS gage 08162000, and more specifically described as Latitude 29 degrees, 18 minutes, 32 seconds; Longitude 96 degrees, 06 minutes, 13 seconds.

(A) United States Geological Survey Gage 08162000, Colorado River at Wharton.

Figure: 30 TAC §298.330(e)(14)(A)

United States Geological Survey Gage 08162000, Colorado River at Wharton

Season	Month	Hydrologic Condition	Subsistence	Base	Seasonal Pulse (2 per season)
Winter	December	Severe	202 cfs	470 cfs	Magnitude: 3,000 cfs Duration: 4 days
	December	Dry	N/A	470 cfs	
	December	Average	N/A	746 cfs	
	January	Severe	315 cfs	492 cfs	
	January	Dry	N/A	492 cfs	
	January	Average	N/A	838 cfs	
	February	Severe	303	597 cfs	
	February	Dry	N/A	597 cfs	
	February	Average	N/A	906 cfs	
Spring	March	Severe	204 cfs	531 cfs	Magnitude: 3,000 cfs Duration: 4 days
	March	Dry	N/A	531 cfs	
	March	Average	N/A	1,036 cfs	
	April	Severe	270 cfs	561 cfs	
	April	Dry	N/A	561 cfs	
	April	Average	N/A	1,011 cfs	
	May	Severe	304 cfs	985 cfs	
	May	Dry	N/A	985 cfs	
	May	Average	N/A	1,397 cfs	
	June	Severe	371 cfs	984 cfs	
	June	Dry	N/A	984 cfs	
	June	Average	N/A	1,512 cfs	
Summer	July	Severe	212 cfs	577 cfs	Magnitude: 3,000 cfs Duration: 4 days
	July	Dry	N/A	577 cfs	
	July	Average	N/A	906 cfs	
	August	Severe	107 cfs	314 cfs	
	August	Dry	N/A	314 cfs	
	August	Average	N/A	522 cfs	
Fall	September	Severe	188 cfs	410 cfs	Magnitude: 3,000 cfs Duration: 4 days
	September	Dry	N/A	410 cfs	
	September	Average	N/A	617 cfs	
	October	Severe	147 cfs	360 cfs	

	October	Dry	N/A	360 cfs	
	October	Average	N/A	749 cfs	
	November	Severe	173 cfs	486 cfs	
	November	Dry	N/A	486 cfs	
	November	Average	N/A	764 cfs	

cfs = cubic feet per second
N/A = not applicable

(B) United States Geological Survey Gage 08162000, Colorado River at Wharton.

Figure: 30 TAC §298.330(e)(14)(B)

United States Geological Survey Gage 08162000, Colorado River at Wharton

Pulse Frequency	**Pulse Magnitude**	**Pulse Duration**
1 per 18 months	8,000 cfs	2 days
1 per 2 years	27,000 cfs	2 days

cfs = cubic feet per second

(15) Lavaca River near Edna, Texas, generally described as USGS gage 08164000, and more specifically described as Latitude 28 degrees, 57 minutes, 35 seconds; Longitude 96 degrees, 41 minutes, 10 seconds.

Figure: 30 TAC §298.330(e)(15)

United States Geological Survey Gage 08164000, Lavaca River near Edna

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**	**Annual Pulse**
Winter	Severe	8.5 cfs	30 cfs	Trigger: 2,000 cfs Volume: 8,000 af Duration: 6 days	Trigger: 4,500 cfs Volume: 18,400 af Duration: 7 days	Trigger: 4,500 cfs Volume: 18,400 af Duration: 7 days
Winter	Dry	N/A	30 cfs			
Winter	Average	N/A	55 cfs			
Winter	Wet	N/A	94 cfs			
Spring	Severe	10 cfs	30 cfs	Trigger: 4,500 cfs Volume: 18,400 af Duration: 7 days	Trigger: 4,500 cfs Volume: 18,400 af Duration: 7 days	
Spring	Dry	N/A	30 cfs			
Spring	Average	N/A	55 cfs			
Spring	Wet	N/A	94 cfs			
Summer	Severe	1.3 cfs	20 cfs	Trigger: 88 cfs Volume: 370 af Duration: 4 days	Trigger: 420 cfs Volume: 1,800 af Duration: 6 days	
Summer	Dry	N/A	20 cfs			
Summer	Average	N/A	48 cfs			
Summer	Wet	N/A	33 cfs			
Fall	Severe	1.2 cfs	20 cfs	Trigger: 1,600 cfs Volume: 6,100 af Duration: 5 days	Trigger: 4,500 cfs Volume: 18,000 af Duration: 6 days	
Fall	Dry	N/A	20 cfs			
Fall	Average	N/A	33 cfs			
Fall	Wet	N/A	58 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

(16) Navidad River at Strane Park near Edna, Texas, generally described as USGS gage 08164390, and more specifically described as Latitude 29 degrees, 03 minutes, 55 seconds; Longitude 96 degrees, 40 minutes, 26 seconds.

Figure: 30 TAC §298.330(e)(16)

United States Geological Survey Gage 08164390, Navidad River at Strane Park near Edna

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**	**Annual Pulse**
Winter	Severe	1 cfs	14 cfs	Trigger: 2,000 cfs Volume: 9,000 af Duration: 6 days	Trigger: 2,500 cfs Volume: 11,250 af Duration: 7 days	Trigger: 2,500 cfs Volume: 11,250 af Duration: 7 days
Winter	Dry	N/A	14 cfs			
Winter	Average	N/A	35 cfs			
Winter	Wet	N/A	71 cfs			
Spring	Severe	2.8 cfs	18 cfs	Trigger: 2,500 cfs Volume: 11,250 af Duration: 7 days	Trigger: 2,500 cfs Volume: 11,250 af Duration: 7 days	
Spring	Dry	N/A	18 cfs			
Spring	Average	N/A	35 cfs			
Spring	Wet	N/A	71 cfs			
Summer	Severe	1.2 cfs	24 cfs	Trigger: 200 cfs Volume: 1,000 af Duration: 5 days	Trigger: 610 cfs Volume: 3,400 af Duration: 6 days	
Summer	Dry	N/A	24 cfs			
Summer	Average	N/A	47 cfs			
Summer	Wet	N/A	84 cfs			
Fall	Severe	2.2 cfs	17 cfs	Trigger: 2,000 cfs Volume: 8,700 af Duration: 6 days	Trigger: 2,500 cfs Volume: 11,250 af Duration: 7 days	
Fall	Dry	N/A	17 cfs			
Fall	Average	N/A	35 cfs			
Fall	Wet	N/A	71 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

(17) Sandy Creek near Ganado, Texas, generally described as USGS gage 08164450, and more specifically described as Latitude 29 degrees, 09 minutes, 36 seconds; Longitude 96 degrees, 32 minutes, 46 seconds.

Figure: 30 TAC §298.330(e)(17)

United States Geological Survey Gage 08164450, Sandy Creek near Ganado

<table>
<tr><th>Season</th><th>Hydrologic Condition</th><th>Subsistence</th><th>Base</th><th>Small Seasonal Pulse (2 per season)</th><th>Large Seasonal Pulse (1 per season)</th><th>Annual Pulse</th></tr>
<tr><td>Winter</td><td>Severe</td><td>1 cfs</td><td>5 cfs</td><td rowspan="4">Trigger: 800 cfs Volume: 4,000 af Duration: 6 days</td><td rowspan="4">Trigger: 1,800 cfs Volume: 10,000 af Duration: 8 days</td><td rowspan="12">Trigger: 2,200 cfs Volume: 12,200 af Duration: 10 days</td></tr>
<tr><td>Winter</td><td>Dry</td><td>N/A</td><td>5 cfs</td></tr>
<tr><td>Winter</td><td>Average</td><td>N/A</td><td>14 cfs</td></tr>
<tr><td>Winter</td><td>Wet</td><td>N/A</td><td>30 cfs</td></tr>
<tr><td>Spring</td><td>Severe</td><td>1 cfs</td><td>5 cfs</td><td rowspan="4">Trigger: 1,400 cfs Volume: 7,300 af Duration: 6 days</td><td rowspan="4">Trigger: 2,200 cfs Volume: 12,200 af Duration: 10 days</td></tr>
<tr><td>Spring</td><td>Dry</td><td>N/A</td><td>5 cfs</td></tr>
<tr><td>Spring</td><td>Average</td><td>N/A</td><td>14 cfs</td></tr>
<tr><td>Spring</td><td>Wet</td><td>N/A</td><td>30 cfs</td></tr>
<tr><td>Summer</td><td>Severe</td><td>1 cfs</td><td>9 cfs</td><td rowspan="4">Trigger: 91 cfs Volume: 500 af Duration: 4 days</td><td rowspan="4">Trigger: 260 cfs Volume: 1,600 af Duration: 7 days</td></tr>
<tr><td>Summer</td><td>Dry</td><td>N/A</td><td>9 cfs</td></tr>
<tr><td>Summer</td><td>Average</td><td>N/A</td><td>21 cfs</td></tr>
<tr><td>Summer</td><td>Wet</td><td>N/A</td><td>39 cfs</td></tr>
<tr><td>Fall</td><td>Severe</td><td>1 cfs</td><td>9 cfs</td><td rowspan="3">Trigger: 630 cfs Volume: 3,100 af Duration:</td><td rowspan="3">Trigger: 1,800 cfs Volume: 9,200 af Duration:</td></tr>
<tr><td>Fall</td><td>Dry</td><td>N/A</td><td>9 cfs</td></tr>
<tr><td>Fall</td><td>Average</td><td>N/A</td><td>21 cfs</td></tr>
</table>

Fall	Wet	N/A	39 cfs	6 days	7 days	

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

(18) East Mustang Creek near Louise, Texas, generally described as USGS gage 08164504, and more specifically described as Latitude 29 degrees, 04 minutes, 14 seconds; Longitude 96 degrees, 25 minutes, 01 seconds.

Figure: 30 TAC §298.330(e)(18)

United States Geological Survey Gage 08164504, East Mustang Creek near Louise

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**	**Annual Pulse**
Winter	Severe	1 cfs	1 cfs	Trigger: 150 cfs Volume: 680 af Duration: 5 days	Trigger: 340 cfs Volume: 1,700 af Duration: 8 days	Trigger: 1,000 cfs Volume: 6,000 af Duration: 10 days
Winter	Dry	N/A	1 cfs			
Winter	Average	N/A	2 cfs			
Winter	Wet	N/A	6 cfs			
Spring	Severe	1 cfs	1 cfs	Trigger: 280 cfs Volume: 1,400 af Duration: 7 days	Trigger: 550 cfs Volume: 3,000 af Duration: 9 days	
Spring	Dry	N/A	1 cfs			
Spring	Average	N/A	3 cfs			
Spring	Wet	N/A	6 cfs			
Summer	Severe	1 cfs	2 cfs	Trigger: 20 cfs Volume: 100 af Duration:	Trigger: 60 cfs Volume: 310 af Duration:	
Summer	Dry	N/A	2 cfs			
Summer	Average	N/A	5 cfs			

Summer	Wet	N/A	8 cfs	5 days	6 days	
Fall	Severe	1 cfs	1 cfs	Trigger: 150 cfs Volume: 650 af Duration: 6 days	Trigger: 430 cfs Volume: 2,100 af Duration: 7 days	
Fall	Dry	N/A	1 cfs			
Fall	Average	N/A	3 cfs			
Fall	Wet	N/A	8 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

(19) West Mustang Creek near Ganado, Texas, generally described as USGS gage 08164503, and more specifically described as Latitude 29 degrees, 04 minutes, 18.69 seconds; Longitude 96 degrees, 28 minutes, 04.90 seconds.

Figure: 30 TAC §298.330(e)(19)

United States Geological Survey Gage 08164503, West Mustang Creek near Ganado

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**	**Annual Pulse**
Winter	Severe	1 cfs	4 cfs	Trigger: 470 cfs Volume: 2,400 af Duration: 6 days	Trigger: 1,000 cfs Volume: 5,600 af Duration: 8 days	Trigger: 1,000 cfs Volume: 5,600 af Duration: 8 days
Winter	Dry	N/A	4 cfs			
Winter	Average	N/A	9 cfs			
Winter	Wet	N/A	20 cfs			
Spring	Severe	1 cfs	5 cfs	Trigger: 810 cfs Volume: 4,400 af Duration:	Trigger: 1,000 cfs Volume: 5,600 af Duration:	
Spring	Dry	N/A	5 cfs			
Spring	Average	N/A	11 cfs			

Spring	Wet	N/A	20 cfs	6 days	8 days	
Summer	Severe	1 cfs	10 cfs	Trigger: 75 cfs Volume: 420 af Duration: 4 days	Trigger: 190 cfs Volume: 1,200 af Duration: 6 days	
Summer	Dry	N/A	10 cfs			
Summer	Average	N/A	18 cfs			
Summer	Wet	N/A	32 cfs			
Fall	Severe	1 cfs	6 cfs	Trigger: 470 cfs Volume: 2,200 af Duration: 6 days	Trigger: 1,000 cfs Volume: 5,600 af Duration: 8 days	
Fall	Dry	N/A	6 cfs			
Fall	Average	N/A	14 cfs			
Fall	Wet	N/A	26 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

(20) Garcitas Creek near Inez, Texas, generally described as USGS gage 08164600, and more specifically described as Latitude 28 degrees, 53 minutes, 28 seconds; Longitude 96 degrees, 49 minutes, 08 seconds.

Figure: 30 TAC §298.330(e)(20)

United States Geological Survey Gage 08164600, Garcitas Creek near Inez

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**	**Annual Pulse**
Winter	Severe	1 cfs	2 cfs	Trigger: 110 cfs Volume: 520 af Duration:	Trigger: 380 cfs Volume: 1,500 af Duration:	Trigger: 380 cfs Volume: 1,500 af Duration:
Winter	Dry	N/A	2 cfs			
Winter	Average	N/A	4 cfs			

Winter	Wet	N/A	7 cfs	8 days	10 days	10 days
Spring	Severe	1 cfs	2 cfs	Trigger: 380 cfs Volume: 1,500 af Duration: 10 days	Trigger: 380 cfs Volume: 1,500 af Duration: 10 days	
Spring	Dry	N/A	2 cfs			
Spring	Average	N/A	4 cfs			
Spring	Wet	N/A	7 cfs			
Summer	Severe	1 cfs	1 cfs	Trigger: 8 cfs Volume: 28 af Duration: 4 days	Trigger: 36 cfs Volume: 150 af Duration: 8 days	
Summer	Dry	N/A	1 cfs			
Summer	Average	N/A	2 cfs			
Summer	Wet	N/A	3 cfs			
Fall	Severe	1 cfs	1 cfs	Trigger: 110 cfs Volume: 420 af Duration: 8 days	Trigger: 380 cfs Volume: 1,500 af Duration: 10 days	
Fall	Dry	N/A	1 cfs			
Fall	Average	N/A	2 cfs			
Fall	Wet	N/A	5 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

(21) Tres Palacios River near Midfield, Texas, generally described as USGS gage 08162600, and more specifically described as Latitude 28 degrees, 55 minutes, 40 seconds; Longitude 96 degrees, 10 minutes, 15 seconds.

Figure: 30 TAC §298.330(e)(21)

United States Geological Survey Gage 08162600, Tres Palacios River near Midfield

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse**	**Large Seasonal Pulse**	**Annual Pulse**

				(2 per season)	**(1 per season)**	
Winter	Severe	2 cfs	9 cfs	Trigger: 650 cfs Volume: 2,500 af Duration: 6 days	Trigger: 1,300 cfs Volume: 4,900 af Duration: 6 days	Trigger: 2,000 cfs Volume: 9,000 af Duration: 8 days
Winter	Dry	N/A	9 cfs			
Winter	Average	N/A	13 cfs			
Winter	Wet	N/A	18 cfs			
Spring	Severe	2.5 cfs	9 cfs	Trigger: 1,200 cfs Volume: 4,400 af Duration: 6 days	Trigger: 1,900 cfs Volume: 7,100 af Duration: 6 days	
Spring	Dry	N/A	9 cfs			
Spring	Average	N/A	13 cfs			
Spring	Wet	N/A	22 cfs			
Summer	Severe	1 cfs	7 cfs	Trigger: 75 cfs Volume: 360 af Duration: 5 days	Trigger: 280 cfs Volume: 1,300 af Duration: 6 days	
Summer	Dry	N/A	7 cfs			
Summer	Average	N/A	13 cfs			
Summer	Wet	N/A	22 cfs			
Fall	Severe	1 cfs	7 cfs	Trigger: 800 cfs Volume: 3,200 af Duration: 6 days	Trigger: 1,900 cfs Volume: 7,700 af Duration: 7 days	
Fall	Dry	N/A	7 cfs			
Fall	Average	N/A	13 cfs			
Fall	Wet	N/A	18 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

§298.335. Water Right Permit Conditions.

(a) For water right permits with an authorization to store or divert water from the Colorado River above Lake Travis, tributaries of the Colorado River, the Lavaca River Basin, and the Colorado-Lavaca and Lavaca-Guadalupe Coastal Basins, except for water

right permits located below Lake Travis on the Colorado River, and to which the environmental flow standards apply, that are issued after the effective date of this subchapter, the water right permit or amendment shall contain flow restriction special conditions that are adequate to protect the environmental flow standards of this subchapter.

(b) For water right permits with an authorization to divert at a rate greater than 500 cubic feet per second (cfs) or to store more than 2,500 acre-feet in an on-channel reservoir, on the Colorado River below Lake Travis, and to which the environmental flow standards apply, that are issued after the effective date of this subchapter, the water right permit or amendment shall contain flow restriction special conditions that are adequate to protect all pulse flow requirements up to the one year pulse flow requirement except as specified in subsections (c) and (d) of this section ~~the environmental flow standards of this subchapter~~.

(c) For water right permits with an authorization to divert at a rate greater than 800 cfs or to store more than 2,500 acre-feet in an on-channel reservoir, on the Colorado River below Lake Travis, and to which the environmental flow standards apply, that are issued after the effective date of this subchapter, the water right permit or amendment shall contain flow restriction special conditions that are adequate to prevent impairment of the one per 18-month pulse flow requirement. Impairment of the one

per 18 month pulse flow requirement would occur if the permit, in combination with other permits subject to this subchapter, that are issued after the effective date of this subchapter, would reduce the frequency of occurrence or the average volume of the one per 18-month pulse by more than 10% based on the period of record of the water availability model in effect at the time the first permit subject to this subchapter is considered.

(d) For water right permits with an authorization to divert at a rate greater than 2,700 cfs or to store more than 2,500 acre-feet in an on-channel reservoir, on the Colorado River below Lake Travis, and to which the environmental flow standards apply, that are issued after the effective date of this subchapter, the water right permit or amendment shall contain flow restriction special conditions that are adequate to protect the one per two-year pulse flow requirement.

(e) ~~(c)~~ For water right permits with an authorization to divert at a rate less than 500 cfs or to store less than 2,500 acre-feet in an on-channel reservoir, on the Colorado River below Lake Travis, and to which the environmental flow standards apply, that are issued after the effective date of this subchapter, the water right permit or amendment shall contain flow restriction special conditions that are adequate to protect the environmental flow standards of this subchapter; however, no special conditions are necessary to preserve or pass high flow pulses.

§298.340. Schedule for Revision of Standards.

The environmental flow standards or environmental flow set-asides adopted in this subchapter for the Colorado and Lavaca River Basins, the Colorado-Lavaca and Lavaca-Guadalupe Coastal Basins, and Matagorda and Lavaca Bays may be revised by the commission through the rulemaking process. The final revised rules shall be effective no sooner than ten years from the effective date of this rule, unless the Colorado and Lavaca Basin and Bay Area Stakeholder Committee submits a work plan approved by the Environmental Flows Advisory Group under Texas Water Code, §11.02362(p), that provides for a periodic review to occur more frequently. The rulemaking process shall include participation by a balanced representation of stakeholders having interests in the Colorado and Lavaca River Basins, the Colorado-Lavaca and Lavaca-Guadalupe Coastal Basins, and Matagorda and Lavaca Bays.

SUBCHAPTER E: GUADALUPE, SAN ANTONIO, MISSION, AND ARANSAS RIVERS, AND MISSION, COPANO, ARANSAS, AND SAN ANTONIO BAYS

§§298.350, 298.355, 298.360, 298.365, 298.370, 298.375, 298.380, 298.385, 298.390

Statutory Authority

The new sections are adopted under Texas Water Code (TWC), §5.102, concerning General Powers; TWC, §5.103, concerning Rules; and TWC, §5.105 concerning General Policy, which authorize the commission to adopt rules as necessary to carry out its power and duties under the TWC. The new sections are also adopted under TWC, §11.0235, concerning Policy Regarding Waters of the State; TWC, §11.147, concerning Effects of Permit on Bays and Estuaries and Instream Uses; and TWC, §11.1471, concerning Environmental Flow Standards and Set-Asides.

The adopted new sections implement TWC, §§11.0235, 11.147, and 11.1471.

§298.350. Applicability and Purpose.

This subchapter contains the environmental flow standards for the Guadalupe, San Antonio, Mission, and Aransas Rivers, their associated tributaries, and Mission, Copano, Aransas, and San Antonio Bays. The provisions of this subchapter control over

any provisions of Subchapter A of this chapter (relating to General Provisions) that are inconsistent with this subchapter relating to environmental flow standards and regulation in the Guadalupe, San Antonio, Mission, and Aransas Rivers, their associated tributaries, and Mission, Copano, Aransas, and San Antonio Bays.

§298.355. Definitions.

The following words or phrases have the following meanings in this subchapter unless the context clearly indicates otherwise:

(1) Average condition--for all measurement points for which a hydrologic condition is applicable, the hydrologic condition that would occur approximately 50% of the time and that is intended to represent periods that are neither dry nor wet.

(2) Dry condition--for all measurement points for which a hydrologic condition is applicable, the hydrologic condition that would occur approximately 25% of the time and that is intended to represent the driest periods.

(3) Fall--the period of time October through December, inclusive.

(4) Inflow regime level--a freshwater inflow pattern, at the most downstream point in the Guadalupe and San Antonio River Basins for San Antonio Bay, or at the most downstream points in the San Antonio-Nueces Coastal Basin for the Mission-Aransas Estuary, that includes quantities and frequencies.

(5) Modeled permitting frequency--the frequencies at which specific volumes of freshwater inflows occur in the commission's water availability models for the river basins included in this subchapter.

(6) Spring--for the measurement points listed in §298.330(c) of this title (relating to Environmental Flow Standards), the period of time April through June, inclusive.

(7) Sound ecological environment--maintains, to some reasonable level, the physical, chemical, and biological attributes and processes of the natural system.

(8) Strategy target frequency--the frequencies at which specific volumes of freshwater inflows occur, and which are used for the sole purpose of providing additional freshwater inflows to the bays and estuaries included in this subchapter through voluntary strategies.

(9) Summer--for the measurement points listed in §298.330(c) of this title (relating to Environmental Flow Standards), the period of time July through September, inclusive.

(10) Time period--for certain measurement points in the San Antonio River Basin, the period of time specifically listed in the column labeled "time-period" in Figures: 30 TAC §298.380(c)(12)(B), (13)(B), (14)(B), and (15)(B) of this title (relating to Environmental Flow Standards).

(11) ~~(10)~~ Wet condition--for all measurement points for which a hydrologic condition is applicable, the hydrologic condition that would occur approximately 25% of the time and that is intended to represent the wettest period.

(12) ~~(11)~~ Winter--the period of time January through March, inclusive.

§298.360. Findings.

(a) The Guadalupe, San Antonio, Mission, and Aransas Rivers, their associated tributaries, Mission, Copano, Aransas, and San Antonio Bays, and the associated estuaries are substantially sound ecological environments.

(b) For the Guadalupe, San Antonio, Mission, and Aransas Rivers, and their associated tributaries, the commission finds that these sound ecological environments can best be maintained by a set of flow standards that implement a schedule of flow quantities that contain subsistence flow, base flow, and high flow pulses at defined measurement points. Minimum flow levels for these components will vary by season and by year since the amount of precipitation and, therefore, whether a system is in subsistence or base flow conditions, will vary from year to year and within a year from season to season, and the number of pulses protected will also vary with the amount of precipitation.

(c) For Mission, Copano, Aransas, and San Antonio Bays, the commission finds that the sound ecological environment of these bays can best be maintained by a set of freshwater inflow standards that include variable freshwater inflow quantities and that incorporate inflow and frequency targets at which specific levels of freshwater inflow occur, which are used for the sole purpose of providing additional freshwater inflows to Mission, Copano, Aransas, and San Antonio Bays through voluntary strategies ~~that vary by season~~.

§298.365. Set-Asides and Standards Priority Date.

The priority date for the environmental flow standards and set-asides established

by this subchapter is March 1, 2011. The priority date for the environmental flow standards will be used in the water availability determination for a new appropriation or for an amendment to an existing water right that increases the amount of water authorized to be stored, taken, or diverted and has no other purpose.

§298.370. Calculation of Hydrologic Conditions.

(a) For new water right authorizations in the San Antonio River Basin and the San Antonio-Nueces Coastal Basin which increase the amount of water authorized to be stored, taken, or diverted as described in §298.10 of this title (relating to Applicability), the determination of the hydrologic condition for a particular season shall be determined once per season. The conditions present on the last day of the month of the preceding season will determine the hydrologic condition for the following season for the applicable measurement point. For each measurement point specified in the applicable river or coastal basin, cumulative streamflow for the previous 12 months will determine the hydrologic condition.

(b) For purposes of permit special conditions related to hydrologic conditions, for water right applications in the San Antonio River Basin and the San Antonio-Nueces Coastal Basin, which increase the amount of water to be stored, taken, or diverted, the hydrologic condition shall be calculated using the full period of record for the United

States Geological Survey (USGS) gage at each measurement point such that dry conditions occur approximately 25% of the time, average conditions occur approximately 50% of the time, and wet conditions occur approximately 25% of the time.

(c) For purposes of water availability determinations, for water right permit applications in the San Antonio River Basin and the San Antonio-Nueces Coastal Basin, which increase the amount of water to be stored, taken, or diverted, hydrologic conditions used in the commission's water availability models shall be calculated such that dry conditions occur approximately 25% of the time, average conditions occur approximately 50% of the time, and wet conditions occur approximately 25% of the time, based on the period of record and simulated flows of the applicable water availability model.

§298.375. Schedule of Flow Quantities.

(a) Schedule of flow quantities. The environmental flow standards adopted by this subchapter constitute a schedule of flow quantities made up of subsistence flow, base flow, and high flow pulses. Environmental flow standards are established for 16 measurement points in §298.380 of this title (relating to Environmental Flow Standards) and this section.

(b) Subsistence flow. The applicable subsistence flow standard varies depending on the seasons as described in §298.355 of this title (relating to Definitions). For a water right holder to which an environmental flow standard applies, at a measurement point that applies to the water right, the water right holder may not store or divert water, unless the flow at the measurement point is above the applicable subsistence flow standard for that point. For measurement points in the Guadalupe River Basin, if the flow at the applicable measurement point is above the subsistence flow standard but below the base flow standard, then the water right holder must allow the applicable subsistence flow, plus 50% of the difference between measured streamflow and the applicable subsistence flow, to pass its measurement point and any remaining flow may be diverted or stored, according to its permit, subject to senior and superior water rights, as long as the flow at the measurement point does not fall below the applicable subsistence flow standard. For measurement points in the San Antonio River Basin and the San Antonio-Nueces Coastal Basin, during dry hydrologic conditions, if the flow at the applicable measurement point is above the subsistence flow standard but below the applicable dry base flow standard, then the water right holder must allow the applicable subsistence flow, plus 50% of the difference between measured streamflow and the applicable subsistence flow, to pass its measurement points and any remaining flow may be diverted or stored, according to its permit, subject to senior and superior water rights, as long as the flow at the measurement point does not fall below the applicable

subsistence flow standard.

(c) Base flow. The applicable base flow level varies depending on the seasons as described in §298.355 of this title, and the hydrologic condition described in §298.370 of this title (relating to Calculation of Hydrologic Conditions) for river and coastal basins to which a hydrologic condition applies. For a water right holder in the San Antonio River Basin or the San Antonio-Nueces Coastal Basin, to which an environmental flow standard applies, at a measurement point that applies to the water right, the water right holder is subject to the base flow standard for the hydrologic condition prevailing at that time, i.e., the water right holder will be subject to one of the following: a dry, an average, or a wet base flow standard. For a water right holder in the Guadalupe River Basin, to which an environmental flow standard applies, at a measurement point that applies to a water right, the water right holder is subject to a base flow standard. For a water right holder to which an environmental flow standard applies, at a measurement point that applies to the water right, when the flow at the applicable measurement point is above the applicable base flow standard, but below any applicable high flow pulse trigger levels, the water right holder may store or divert water according to its permit, subject to senior and superior water rights, as long as the flow at the applicable measurement point does not fall below the applicable base flow standard.

(d) High flow pulses. High flow pulses are relatively short-duration, high flows

within the watercourse that occur during or immediately following a storm event.

(1) For measurement points in the Guadalupe River Basin, two pulses per season are to be passed (i.e., no storage or diversion by an applicable water right holder), if applicable, and as described in §298.380 of this title, if the flows are above the applicable subsistence or base flow standard, and if the applicable high flow pulse trigger level is met at the applicable measurement point. The water right holder shall not divert or store water except during times that streamflow at the applicable measurement point exceeds the applicable high flow pulse trigger level and until either the applicable volume amount has passed the measurement point or the applicable duration time has passed since the high flow pulse trigger level occurred.

(2) For measurement points in the San Antonio River Basin and the San Antonio-Nueces Coastal Basin, one, two, or three pulses per season are to be passed (i.e., no storage or diversion by an applicable water right holder), if applicable, and as described in §298.380 of this title, if the flows are above the applicable base flow standard, and if the applicable high flow pulse trigger level is met at the applicable measurement point. For the measurement points described in §298.380(c) (12) - (15) of this title, the water right holder shall not divert or store water until the daily average flow at the applicable measurement point equals at least the large high flow pulse trigger level on consecutive days equaling the duration time, except during times that

streamflow at the applicable measurement point exceeds the applicable high flow pulse trigger level. For all other measurement points in the San Antonio River Basin and the San Antonio-Nueces Coastal Basin and for small seasonal pulses at the measurement points described in §298.380(c) (12) - (15) of this title, the water right holder shall not divert or store water except during times that streamflow at the applicable measurement point exceeds the applicable high flow pulse trigger level and until either the applicable volume amount has passed the measurement point or the duration time has passed since the high flow pulse trigger level occurred.

(3) If the applicable high flow pulse flow trigger level does not occur in a season, then the water right holder need not stop storing or diverting to produce a high flow pulse. The water right holder is not required to release water lawfully stored to produce a high flow pulse.

(4) Each season is independent of the preceding and subsequent seasons with respect to high flow pulse frequency and each time-period is independent of each other time-period with respect to high flow pulse frequency.

(5) High flow pulses are independent of the hydrologic conditions set out in §298.370 of this title, for measurement points for which a hydrologic condition is

applicable. For all other measurement points, high flow pulses are applicable under both subsistence and base flow conditions.

(6) For measurement points in the San Antonio River Basin and the San Antonio-Nueces Coastal Basin, except those described in §298.380(c)(12) - (15) of this title, if a pulse flow requirement for a large seasonal pulse is satisfied for a particular season, one of the smaller pulse requirements is also considered to be satisfied. For measurement points described in §298.380(c)(12) - (15) of this title, if a pulse flow requirement for a large seasonal pulse is satisfied, all smaller pulse requirements for the applicable season are also considered to be satisfied.

(e) Stored water. A water right owner that has stored water in accordance with the terms and conditions of its water right, including any applicable environmental flow requirement in effect at the time the water was stored, may divert, release, or use this water, even if the applicable environmental flow requirement is not met at the time of the subsequent diversion, release, or use of that stored water.

§298.380. Environmental Flow Standards.

(a) A water right application in the Guadalupe and San Antonio River Basins and the San Antonio-Nueces Coastal Basin, which increases the amount of water authorized

to be stored, taken, or diverted as described in §298.10 of this title (relating to Applicability), shall not cause or contribute to an impairment of the inflow regimes as described in the figures in this subsection. Impairment of the inflow regime shall be evaluated as part of the water availability determination for a new water right or amendment that is subject to this subchapter. For purposes of this subsection, impairment would occur if the application, when considered in combination with any authorizations subject to this subchapter, which were issued prior to this application, would impair the modeled permitting frequency of any inflow regime by more than the values set out in paragraphs (3)(A) - (C) and (4)(A) - (C) of this subsection ~~10%.~~

(1) Impairment to the modeled permitting frequency shall be calculated individually for each inflow regime level in Figures: 30 TAC §298.380(a)(3) and (4) for which a specific frequency is identified at the most downstream point in the water availability model, which represents inflows to San Antonio Bay.

(2) Impairment is calculated by addition or subtraction of the values set out in paragraphs (3)(A) - (C) and (4)(A) - (C) of this subsection, except that impairment of inflow regime Spring 4 and Spring 5 combined shall be calculated as set out in paragraph (3)(C) of this subsection.

(3) ~~(1)~~ Bay and Estuary Freshwater Inflow Standards for the San Antonio Bay System for the Spring Season.

Figure: 30 TAC §298.380(a)(3) ~~30 TAC §298.380(a)(1)~~

Bay and Estuary Freshwater Inflow Standards for the San Antonio Bay System for the Spring Season

Inflow Regime	**Inflow Quantity (February) (af)**	**Inflow Quantity (March-May) (af)**	**Strategy Target Frequency**
Spring 1	N/A	550,000-925,000	at least 12% of the years
Spring 2	N/A	375,000-550,000	at least 12% of the years
Spring 3	N/A	275,000-375,000	N/A
Spring 4	greater than 75,000	150,000-275,000	N/A
Spring 5	less than 75,000	150,000-275,000	N/A
Spring 6	N/A	0-150,000	no more than 9% of the years
Spring 2 and Spring 3 combined	N/A	N/A	at least 17% of the years
Spring 4 and Spring 5 combined	N/A	N/A	less than 67% of the total

(A) The modeled permitting frequencies for inflow regimes Spring 1, Spring 2, and Spring 2 and Spring 3 combined, as described in Figure: 30 TAC

§298.380(a)(3), and calculated as a percentage of total years, shall not be decreased by more than 5%.

(B) The modeled permitting frequencies for the inflow regime Spring 6, as described by Figure: 30 TAC §298.380(a)(3), and calculated as a percentage of total years, shall not be increased by more than 8%.

(C) The modeled permitting frequency for inflow regime Spring 4 and Spring 5 combined, as described in Figure: 30 TAC §298.380(a)(3), and calculated as a percentage of Spring 5 years to the total combined years, shall not be increased to more than 67% of the total years.

(4) ~~(2)~~ Bay and Estuary Freshwater Inflow Standards for the San Antonio Bay System for the Summer Season.

Figure: 30 TAC §298.380(a)(4) ~~30 TAC §298.380(a)(2)~~

Bay and Estuary Freshwater Inflow Standards for the San Antonio Bay System for the Summer Season

Inflow Regime	**Inflow Quantity (June) (af)**	**Inflow Quantity (July-September) (af)**	**Strategy Target Frequency**
Summer 1	N/A	450,000-800,000	at least 12% of the years
Summer 2	N/A	275,000-	at least 17%

		450,000	of the years
Summer 3	N/A	170,000-275,000	N/A
Summer 4	greater than 40,000	75,000-170,000	N/A
Summer 5	less than 40,000	75,000-170,000	N/A
Summer 6	N/A	50,000-75,000	N/A
Summer 7	N/A	0-50,000	no more than 6% of the years
Summer 2 and Summer 3 combined	N/A	N/A	at least 30% of the years
Summer 4 and Summer 5 combined	N/A	N/A	Summer 5 no more than 17% of the total
Summer 6 and Summer 7 combined	N/A	N/A	no more than 9% of the years

af=acre feet

(A) The modeled permitting frequencies for inflow regimes Summer 1, Summer 2, and Summer 1 and Summer 2 combined, as described in Figure: 30 TAC §298.380(a)(4), and calculated as a percentage of total years, shall not be decreased by more than 5%.

(B) The modeled permitting frequencies for the inflow regime Summer 7, as described by Figure: 30 TAC §298.380(a)(4), and calculated as a percentage of total years, shall not be increased by more than 8%.

(C) The modeled permitting frequency for inflow regime Summer 4 and Summer 5 combined, as described in Figure: 30 TAC §298.380(a)(4), and calculated as a percentage of Summer 5 years to total combined years, shall not be increased to more than 10%.

(5) ~~(3)~~ Bay and Estuary Freshwater Inflow Standards for Mission and Aransas Bays for the Summer Season.

Figure: 30 TAC §298.380(a)(5) ~~30 TAC §298.380(a)(3)~~

Bay and Estuary Freshwater Inflow Standards for Mission and Aransas Bays for the Summer Season

Inflow Regime	**Inflow Quantity (February) (af)**	**Inflow Quantity (March-May) (af)**	**Strategy Target Frequency**
Summer 1	N/A	500,000-1,000,000	at least 2% of the years

af=acre feet

(b) To the extent that strategies are implemented through a water rights permit or amendment to help meet the freshwater inflow standards for San Antonio, Mission, Aransas, and Copano Bays, a water right application in the Guadalupe and San Antonio River Basins and the San Antonio-Nueces Coastal Basin, which increases the amount of water authorized to be stored, taken or diverted as described in §298.10 of this title, shall not reduce the modeled permitting frequency for any inflow regime level, listed in

Figure: 30 TAC §298.380(a)(1), Figure: 30 TAC §298.380(a)(2), and Figure: 30 TAC §298.380(a)(3), below the level that would occur with the permitted strategy or strategies in place.

(c) The following environmental flow standards are established for the following described measurement points:

(1) Guadalupe River at Comfort, Texas, generally described as United States Geological Survey (USGS) gage 08167000, and more particularly described as Latitude 29 degrees, 57 minutes, 86 seconds; Longitude 98 degrees, 53 minutes, 49.80 seconds.

Figure: 30 TAC §298.380(c)(1)

United States Geological Survey Gage 08167000, Guadalupe River at Comfort

Season	**Subsistence**	**Base**	**Pulse**
Winter	31 cfs	77 cfs	2 per season Trigger: 140 cfs Volume: 1,030 af Duration: 11 days
Spring	18 cfs	69 cfs	2 per season Trigger: 400 cfs Volume: 2,980 af Duration: 17 days
Summer	2 cfs	50 cfs	2 per season Trigger: 160 cfs Volume: 1,130 af Duration: 12 days

Fall	25 cfs	77 cfs	2 per season Trigger: 160 cfs Volume: 1,110 af Duration: 13 days

cfs = cubic feet per second
af = acre-feet

(2) Guadalupe River near Spring Branch, Texas, generally described as USGS gage 08167500, and more particularly described as Latitude 29 degrees, 51 minutes, 37 seconds; Longitude 98 degrees, 23 minutes, 00 seconds.

Figure: 30 TAC §298.380(c)(2)

United States Geological Survey Gage 08167500, Guadalupe River near Spring Branch

Season	Subsistence	Base	Pulse
Winter	18 cfs	100 cfs	2 per season Trigger: 210 cfs Volume: 1,520 af Duration: 11 days
Spring	18 cfs	91 cfs	2 per season Trigger: 870 cfs Volume: 6,500 af Duration: 19 days
Summer	18 cfs	64 cfs	2 per season Trigger: 240 cfs Volume: 1,520 af Duration: 11 days
Fall	18 cfs	100 cfs	2 per season Trigger: 230 cfs Volume: 1,660 af Duration: 12 days

cfs = cubic feet per second
af = acre-feet

(3) Blanco River at Wimberley, Texas, generally described as USGS gage 08171000, and more particularly described as Latitude 29 degrees, 59 minutes, 39 seconds; Longitude 98 degrees, 05 minutes, 19 seconds.

Figure: 30 TAC §298.380(c)(3)

United States Geological Survey Gage 08171000, Blanco River at Wimberley

Season	Subsistence	Base	Pulse
Winter	10 cfs	34 cfs	2 per season Trigger: 54 cfs Volume: 360 af Duration: 10 days
Spring	13 cfs	40 cfs	2 per season Trigger: 360 cfs Volume: 2,370 af Duration: 18 days
Summer	8 cfs	36 cfs	2 per season Trigger: 74 cfs Volume: 410 af Duration: 9 days
Fall	10 cfs	36 cfs	2 per season Trigger: 82 cfs Volume: 500 af Duration: 10 days

cfs = cubic feet per second
af = acre-feet

(4) San Marcos River at Luling, Texas, generally described as USGS gage 08172000, and more particularly described as Latitude 29 degrees, 39 minutes, 58 seconds; Longitude 97 degrees, 39 minutes, 02 seconds.

Figure: 30 TAC §298.380(c)(4)

United States Geological Survey Gage 08172000, San Marcos River at Luling

Season	Subsistence	Base	Pulse
Winter	89 cfs	160 cfs	2 per season Trigger: 340 cfs Volume: 1,800 af Duration: 8 days
Spring	89 cfs	160 cfs	2 per season Trigger: 1,140 cfs Volume: 6,800 af Duration: 14 days
Summer	73 cfs	170 cfs	2 per season Trigger: 240 cfs Volume: 1,090 af Duration: 6 days
Fall	81 cfs	170 cfs	2 per season Trigger: 540 cfs Volume: 2,740 af Duration: 9 days

cfs = cubic feet per second
af = acre-feet

(5) Plum Creek near Luling, Texas generally described as USGS gage 08173000, and more particularly described as Latitude 29 degrees, 41 minutes, 58 seconds; Longitude 97 degrees, 36 minutes, 12 seconds.

Figure: 30 TAC §298.380(c)(5)

United States Geological Survey Gage 08173000, Plum Creek near Luling

Season	Subsistence	Base	Pulse

Winter	3 cfs	8 cfs	2 per season Trigger: 350 cfs Volume: 1,800 af Duration: 17 days
Spring	2 cfs	6 cfs	2 per season Trigger: 720 cfs Volume: 3,300 af Duration: 17 days
Summer	1 cfs	3 cfs	2 per season Trigger: 48 cfs Volume: 230 af Duration: 10 days
Fall	1 cfs	5 cfs	2 per season Trigger: 150 cfs Volume: 720 af Duration: 13 days

cfs = cubic feet per second
af = acre-feet

(6) Guadalupe River at Gonzales, Texas, generally described as USGS gage 08173900, and more particularly described as Latitude 29 degrees, 29 minutes, 03 seconds; Longitude 97 degrees, 27 minutes, 00 seconds.

Figure: 30 TAC §298.380(c)(6)

United States Geological Survey Gage 08173900, Guadalupe River at Gonzales

Season	**Subsistence**	**Base**	**Pulse**
Winter	210 cfs	796 cfs	2 per season Trigger: 1,150 cfs Volume: 9,640 af Duration: 13 days
Spring	210 cfs	791 cfs	2 per season Trigger: 3,250 cfs Volume: 26,900 af Duration: 17 days
Summer	210 cfs	727 cfs	2 per season Trigger: 1,760 cfs

			Volume: 14,800 af Duration: 14 days
Fall	180 cfs	746 cfs	2 per season Trigger: 1,410 cfs Volume: 11,400 af Duration: 13 days

cfs = cubic feet per second
af = acre-feet

(7) Sandies Creek near Westhoff, Texas, generally described as USGS gage 08175000, and more particularly described as Latitude 29 degrees, 12 minutes, 54 seconds; Longitude 97 degrees, 26 minutes, 57 seconds.

Figure: 30 TAC §298.380(c)(7)

United States Geological Survey Gage 08175000, Sandies Creek near Westhoff

Season	**Subsistence**	**Base**	**Pulse**
Winter	4 cfs	10 cfs	2 per season Trigger: 300 cfs Volume: 1,880 af Duration: 16 days
Spring	1 cfs	6 cfs	2 per season Trigger: 440 cfs Volume: 2,710 af Duration: 18 days
Summer	1 cfs	3 cfs	2 per season Trigger: 59 cfs Volume: 330 af Duration: 11 days
Fall	2 cfs	6 cfs	2 per season Trigger: 150 cfs Volume: 960 af Duration: 14 days

cfs = cubic feet per second
af = acre-feet

(8) Guadalupe River at Cuero, Texas, generally described as USGS gage 08175800, and more particularly described as Latitude 29 degrees, 05 minutes, 25 seconds; Longitude 97 degrees, 19 minutes, 46 seconds.

Figure: 30 TAC §298.380(c)(8)

United States Geological Survey Gage 08175800, Guadalupe River at Cuero

Season	Subsistence	Base	Pulse
Winter	130 cfs	980 cfs	2 per season Trigger: 1,610 cfs Volume: 14,100 af Duration: 13 days
Spring	120 cfs	940 cfs	2 per season Trigger: 3,370 cfs Volume: 31,800 af Duration: 18 days
Summer	130 cfs	800 cfs	2 per season Trigger: 2,110 cfs Volume: 19,300 af Duration: 17 days
Fall	86 cfs	870 cfs	2 per season Trigger: 1,730 cfs Volume: 14,100 af Duration: 13 days

cfs = cubic feet per second
af = acre-feet

(9) Guadalupe River at Victoria, Texas, generally described as USGS gage 08176500, and more particularly described as Latitude 28 degrees, 47 minutes, 34 seconds; Longitude 97 degrees, 00 minutes, 46 seconds.

Figure: 30 TAC §298.380(c)(9)

United States Geological Survey Gage 08176500, Guadalupe River at Victoria

Season	Subsistence	Base	Pulse
Winter	160 cfs	975 cfs	2 per season Trigger: 1,690 cfs Volume: 14,400 af Duration: 13 days
Spring	130 cfs	945 cfs	2 per season Trigger: 3,300 cfs Volume: 33,000 af Duration: 18 days
Summer	150 cfs	795 cfs	2 per season Trigger: 2,060 cfs Volume: 19,200 af Duration: 16 days
Fall	110 cfs	865 cfs	2 per season Trigger: 1,880 cfs Volume: 15,600 af Duration: 13 days

cfs = cubic feet per second
af = acre-feet

(10) Medina River at Bandera, Texas, generally described as USGS gage 08178880, and more particularly described as Latitude 29 degrees, 43 minutes, 25 seconds; Longitude 99 degrees, 04 minutes, 11 seconds.

Figure: 30 TAC §298.380(c)(10)

United States Geological Survey Gage 08178880, Medina River at Bandera

Season	Hydrologic Condition	Subsistence	Base	Small Seasonal Pulse (2 per season)	Large Seasonal Pulse (1 per season)

Winter	Dry	6 cfs	17 cfs	Trigger: 53 cfs Volume: 400 af Duration: 12 days	Trigger: 110 cfs Volume: 960 af Duration: 17 days
Winter	Average	N/A	32 cfs		
Winter	Wet	N/A	54 cfs		
Spring	Dry	7 cfs	10 cfs	Trigger: 110 cfs Volume: 900 af Duration: 17 days	Trigger: 480 cfs Volume: 4,190 af Duration: 28 days
Spring	Average	N/A	22 cfs		
Spring	Wet	N/A	48 cfs		
Summer	Dry	1 cfs	6 cfs	Trigger: 94 cfs Volume: 670 af Duration: 14 days	Trigger: 340 cfs Volume: 2,310 af Duration: 21 days
Summer	Average	N/A	16 cfs		
Summer	Wet	N/A	41 cfs		
Fall	Dry	2 cfs	16 cfs	Trigger: 68 cfs Volume: 500 af Duration: 14 days	Trigger: 220 cfs Volume: 1,930 af Duration: 24 days
Fall	Average	N/A	33 cfs		
Fall	Wet	N/A	49 cfs		

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

(11) Medina River at San Antonio, Texas, generally described as USGS gage 08181500, and more particularly described as Latitude 29 degrees, 15 minutes, 50 seconds; Longitude 98 degrees, 29 minutes, 26 seconds.

Figure: 30 TAC §298.380(c)(11)

United States Geological Survey Gage 08181500, Medina River at San Antonio

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**
Winter	Dry	14 cfs	20 cfs	Trigger: 120 cfs Volume: 970 af Duration: 15 days	Trigger: 350 cfs Volume: 3,570 af Duration: 27 days
Winter	Average	N/A	53 cfs		
Winter	Wet	N/A	71 cfs		
Spring	Dry	12 cfs	37 cfs	Trigger: 380 cfs Volume: 2,680 af Duration: 17 days	Trigger: 1,000 cfs Volume: 7,950 af Duration: 27 days
Spring	Average	N/A	62 cfs		
Spring	Wet	N/A	77 cfs		
Summer	Dry	8 cfs	33 cfs	Trigger: 140 cfs Volume: 860 af Duration: 12 days	Trigger: 440 cfs Volume: 3,050 af Duration: 21 days
Summer	Average	N/A	57 cfs		
Summer	Wet	N/A	72 cfs		
Fall	Dry	13 cfs	27 cfs	Trigger: 130 cfs Volume: 930 af Duration: 14 days	Trigger: 450 cfs Volume: 3,890 af Duration: 28 days
Fall	Average	N/A	60 cfs		
Fall	Wet	N/A	74 cfs		

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

(12) San Antonio River near Elmendorf, Texas, generally described as USGS gage 08181800, and more particularly described as Latitude 29 degrees, 13 minutes, 19 seconds; Longitude 98 degrees, 21 minutes, 20 seconds.

(A) United States Geological Survey Gage 08181800, San Antonio River near Elmendorf: Subsistence Flows, Base Flows, and Small Seasonal Pulses.

Figure: 30 TAC §298.380(c)(12)(A)

United States Geological Survey Gage 08181800, San Antonio River near Elmendorf: Subsistence Flows, Base Flows, and Small Seasonal Pulses

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (1 per season)**
Winter	Dry	60 cfs	115 cfs	Trigger: 830 cfs Volume: 6,210 af Duration: 14 days
Winter	Average	N/A	262 cfs	
Winter	Wet	N/A	328 cfs	
Spring	Dry	60 cfs	106 cfs	Trigger: 1,560 cfs Volume: 10,700 af Duration: 16 days
Spring	Average	N/A	237 cfs	
Spring	Wet	N/A	364 cfs	
Summer	Dry	60 cfs	87 cfs	Trigger: 1,110 cfs Volume: 6,460 af Duration: 12 days
Summer	Average	N/A	178 cfs	
Summer	Wet	N/A	341 cfs	
Fall	Dry	60 cfs	92 cfs	Trigger: 1,010 cfs Volume: 6,570 af Duration: 13 days
Fall	Average	N/A	223 cfs	
Fall	Wet	N/A	367 cfs	

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

(B) United States Geological Survey Gage 08181800, San Antonio River near Elmendorf: Large Pulses.

Figure: 30 TAC §298.380(c)(12)(B)

United States Geological Survey Gage 08181800, San Antonio River near Elmendorf: Large Pulses

Time Period	Frequency	Trigger	Duration
April through June	3 per time period	3,000 cfs	2 days
May through June	2 per time period	4,000 cfs	2 days
July through November	2 per time period	4,000 cfs	2 days

cfs = cubic feet per second

(13) San Antonio River near Falls City, Texas, generally described as USGS gage 08183500, and more particularly described as Latitude 28 degrees, 57 minutes, 05 seconds; Longitude 98 degrees, 03 minutes, 50 seconds.

(A) United States Geological Survey Gage 08183500, San Antonio River near Falls City: Subsistence Flows, Base Flows, and Small Seasonal Pulses.

Figure: 30 TAC §298.380(c)(13)(A)

United States Geological Survey Gage 08183500, San Antonio River near Falls City: Subsistence Flows, Base Flows, and Small Seasonal Pulses

Season	Hydrologic Condition	Subsistence	Base	Small Seasonal Pulse (1 per season)
Winter	Dry	60 cfs	152 cfs	Trigger: 830 cfs Volume: 6,330 af Duration: 16 days
Winter	Average	N/A	292 cfs	
Winter	Wet	N/A	424 cfs	

Spring	Dry	60 cfs	137 cfs	Trigger: 1,670 cfs Volume: 12,300 af Duration: 19 days
Spring	Average	N/A	264 cfs	
Spring	Wet	N/A	467 cfs	
Summer	Dry	60 cfs	113 cfs	Trigger: 1,030 cfs Volume: 6,440 af Duration: 14 days
Summer	Average	N/A	199 cfs	
Summer	Wet	N/A	430 cfs	
Fall	Dry	60 cfs	117 cfs	Trigger: 850 cfs Volume: 5,690 af Duration: 14 days
Fall	Average	N/A	246 cfs	
Fall	Wet	N/A	479 cfs	

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

(B) United States Geological Survey Gage 08183500, San Antonio River near Falls City: Large Pulses.

Figure: 30 TAC §298.380(c)(13)(B)

United States Geological Survey Gage 08183500, San Antonio River near Falls City: Large Pulses

Time Period	Frequency	Trigger	Duration
April through June	3 per time period	4,000 cfs	2 days
February through April	2 per time period	4,000 cfs	2 days
July through November	2 per time period	6,500 cfs	2 days

cfs = cubic feet per second

(14) Cibolo Creek near Falls City, Texas, generally described as USGS gage 08186000, and more particularly described as Latitude 29 degrees, 00 minutes, 50 seconds; Longitude 97 degrees, 55 minutes, 48 seconds.

(A) United States Geological Survey Gage 08186000, Cibolo Creek near Falls CitySubsistence Flows, Base Flows, and Small Seasonal Pulses.

Figure: 30 TAC §298.380(c)(14)(A)

United States Geological Survey Gage 08186000, Cibolo Creek near Falls City
Subsistence Flows, Base Flows, and Small Seasonal Pulses

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse**
Winter	Dry	8 cfs	20 cfs	Trigger: 570 cfs Volume: 3,200 af Duration: 20 days Frequency: 1 per season
Winter	Average	N/A	28 cfs	
Winter	Wet	N/A	39 cfs	
Spring	Dry	8 cfs	16 cfs	N/A
Spring	Average	N/A	28 cfs	
Spring	Wet	N/A	44 cfs	
Summer	Dry	8 cfs	11 cfs	Trigger: 390 cfs Volume: 1,990 af Duration: 15 days Frequency: 1 per season
Summer	Average	N/A	20 cfs	
Summer	Wet	N/A	37 cfs	
Fall	Dry	8 cfs	13 cfs	Trigger: 190 cfs Volume: 1,000 af Duration: 13 days Frequency: 2 per season
Fall	Average	N/A	24 cfs	
Fall	Wet	N/A	40 cfs	

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

(B) United States Geological Survey Gage 08186000, Cibolo Creek near Falls City: Large Pulses.

Figure: 30 TAC §298.380(c)(14)(B)

United States Geological Survey Gage 08186000, Cibolo Creek near Falls City: Large Pulses

Time Period	Frequency	Trigger	Duration
April through June	3 per time period	1,000 cfs	2 days
July through October	2 per time period	1,000 cfs	2 days
July through November	2 per time period	2,500 cfs	2 days

cfs = cubic feet per second

(15) San Antonio River at Goliad, Texas, generally described as USGS gage 08188500, and more particularly described as Latitude 28 degrees, 38 minutes, 57.43 seconds; Longitude 97 degrees, 23 minutes, 05.49 seconds.

(A) United States Geological Survey Gage 08188500, San Antonio River at Goliad: Subsistence Flows, Base Flows, and Small Seasonal Pulses.

Figure: 30 TAC §298.380(c)(15)(A)

United States Geological Survey Gage 08188500, San Antonio River at Goliad:

Subsistence Flows, Base Flows, and Small Seasonal Pulses

Season	Hydrologic Condition	Subsistence	Base	Small Seasonal Pulse
Winter	Dry	60 cfs	200 cfs	Trigger: 1,520 cfs Volume: 12,800 af Duration: 19 days Frequency: 1 per season
Winter	Average	N/A	329 cfs	
Winter	Wet	N/A	469 cfs	
Spring	Dry	60 cfs	174 cfs	Trigger: 1,570 cfs Volume: 11,300 af Duration: 16 days Frequency: 2 per season
Spring	Average	N/A	313 cfs	
Spring	Wet	N/A	502 cfs	
Summer	Dry	60 cfs	139 cfs	Trigger: 1,640 cfs Volume: 11,200 af Duration: 16 days Frequency: 1 per season
Summer	Average	N/A	237 cfs	
Summer	Wet	N/A	481 cfs	
Fall	Dry	60 cfs	167 ~~367~~ cfs	Trigger: 2,320 cfs Volume: 17,600 af Duration: 19 days Frequency: 1 per season
Fall	Average	N/A	280 cfs	
Fall	Wet	N/A	584 cfs	

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

(B) United States Geological Survey Gage 08188500, San Antonio River at Goliad: Large Pulses.

Figure: 30 TAC §298.380(c)(15)(B)

United States Geological Survey Gage 08188500, San Antonio River at Goliad: Large Pulses

Time Period	Frequency	Trigger	Duration
April through June	3 per time period	4,000 cfs	2 days

February through April	2 per time period	4,000 cfs	2 days
July through November	2 per time period	8,000 cfs	2 days

cfs = cubic feet per second

(16) Mission River at Refugio, Texas, generally described as USGS gage 08189500, and more particularly described as Latitude 28 degrees, 17 minutes, 30 seconds; Longitude 97 degrees, 16 minutes, 44 seconds.

Figure: 30 TAC §298.380(c)(16)

United States Geological Survey Gage 08189500, Mission River at Refugio

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**
Winter	Dry	3 cfs	5 cfs	Trigger: 60 cfs Volume: 310 af Duration: 8 days	Trigger: 450 cfs Volume: 2,340 af Duration: 15 days
Winter	Average	N/A	9 cfs		
Winter	Wet	N/A	15 cfs		
Spring	Dry	2 cfs	5 cfs	Trigger: 320 cfs Volume: 1,440 af Duration: 10 days	Trigger: 1,560 cfs Volume: 7,910 af Duration: 18 days
Spring	Average	N/A	8 cfs		
Spring	Wet	N/A	14 cfs		
Summer	Dry	1 cfs	4 cfs	Trigger: 57 cfs Volume: 240 af	Trigger: 420 cfs Volume: 2,010 af
Summer	Average	N/A	7 cfs		

Summer	Wet	N/A	12 cfs	Duration: 6 days	Duration: 12 days
Fall	Dry	2 cfs	5 cfs	Trigger: 45 cfs Volume: 200 af Duration: 6 days	Trigger: 410 cfs Volume: 2,090 af Duration: 14 days
Fall	Average	N/A	8 cfs		
Fall	Wet	N/A	15 cfs		

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

§298.385. Water Right Permit Conditions.

(a) For water right permits with an authorization to store or divert water in the Guadalupe and San Antonio River Basins and the San Antonio-Nueces Coastal Basin, to which the environmental flow standards apply, that are issued after the effective date of this subchapter, the water right permit or amendment shall contain flow restriction special conditions that are adequate to protect the environmental flow standards of this subchapter.

(b) For water right permits with an authorization to divert water in the Guadalupe and San Antonio River Basins and the San Antonio-Nueces Coastal Basin at a rate less than 20% of the pulse trigger level requirements of an applicable high flow pulse at a measurement point, as described in §298.380(c) of this title (relating to Environmental Flow Standards), and to which the environmental flow standards apply,

that are issued after the effective date of this subchapter, the water right permit or amendment shall contain flow restriction special conditions that are adequate to protect the environmental flow standards of this subchapter; however, no special conditions are necessary to preserve or pass that applicable high flow pulse.

§298.390. Schedule for Revision of Standards.

The environmental flow standards or environmental flow set-asides adopted in this subchapter for the Guadalupe, San Antonio, Mission, and Aransas Rivers, their associated tributaries, Mission, Copano, Aransas, and San Antonio Bays, and the associated estuaries may be revised by the commission through the rulemaking process. The final revised rules shall be effective no sooner than ten years from the effective date of this rule, unless the Guadalupe, San Antonio, Mission, and Aransas Basin and Bay Area Stakeholder Committee submits a work plan approved by the advisory group under Texas Water Code, §11.02362(p), that provides for a periodic review to occur more frequently. The rulemaking process shall include participation by a balanced representation of stakeholders having interests in the Guadalupe, San Antonio, Mission, and Aransas Rivers, their associated tributaries, Mission, Copano, Aransas, and San Antonio Bays.

ORDER ADOPTING NEW AND AMENDED RULES

Docket No. 2011-1124-RUL

On August 8, 2012, the Texas Commission on Environmental Quality (Commission) adopted new and amended rules in 30 TAC Chapter 298, concerning Environmental Flow Standards for Surface Water. The proposed rules were published for comment in the April 13, 2012 issue of the *Texas Register* (37 TexReg 2521).

IT IS THEREFORE ORDERED BY THE COMMISSION that the new and amended rules are hereby adopted. The Commission further authorizes staff to make any non-substantive revisions to the rules necessary to comply with *Texas Register* requirements. The adopted rules and the preamble to the adopted rules are incorporated by reference in this Order as if set forth at length verbatim in this Order.

This Order constitutes the Order of the Commission required by the Administrative Procedure Act, Government Code, § 2001.033.

If any portion of this Order is for any reason held to be invalid by a court of competent jurisdiction, the invalidity of any portion shall not affect the validity of the remaining portions.

Issued date:

TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY

_____

Bryan W. Shaw, Ph.D., Chairman

DRAFT

(1) absence of management practices designed to ensure compliance;

(2) a violation of a commission issued enforcement order or court order;

(3) a violation contained in the agreed order involves an emission or discharge of contaminants to the environment or other actions meeting one or more of the following criteria:

(A) people have been exposed to pollutants which exceed levels that are protective;

(B) environmental receptors have been exposed to pollutants which exceed levels that are protective;

(C) unauthorized diversion, taking, or storage of state water or an unauthorized change in flood elevation of a stream which deprives others of water, severely affects aquatic life, or results in a safety hazard, property damage, or economic loss; or

(D) unauthorized emissions which are excessive emissions events;

(4) the respondent has been the subject of any of the following repeated enforcement actions (Notice of Violation, enforcement order, judgment) over the prior five-year period from the Notice of Enforcement date:

(A) three repeated enforcement actions for the same violation as contained in the current agreed order or a substantial history of the same violation entity-wide;

(B) three repeated enforcement actions for the same violations or substantial history of the same violation as contained in the current agreed order by the same respondent who is required to be registered, certified, or licensed by TCEQ prior to performing certain activities;

(C) two prior enforcement orders having the same general cause for nuisance violations;

(5) regardless of specific violations, a respondent has demonstrated a pattern of non-compliance with environmental laws; or

(6) indifference to legal duty.

§70.12. Notice of Decisions and Orders.

(a) For rulings, orders, or decisions issued by the commission or the executive director, parties shall be given notice, in accordance with Texas Government Code, §2001.142. The notice shall include:

(1) the commission's or the executive director's findings;

(2) the amount of the penalty;

(3) the right to judicial review of the commission's or the executive director's order; and

(4) any other information required by law.

(b) In addition to the requirements of subsection (a) of this section, when the commission or the executive director issues an enforcement order in which administrative penalties have been assessed, the chief clerk shall file notice of the commission's or the executive director's decision and order in the *Texas Register* not later than ten days after the date on which the decision is adopted.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's legal authority to adopt.

Filed with the Office of the Secretary of State on March 29, 2012.

TRD-201201642
Kathleen C. Decker
Director, Litigation Division
Texas Commission on Environmental Quality
Earliest possible date of adoption: May 13, 2012
For further information, please call: (512) 239-2548

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30 TAC §70.11

(Editor's note: The text of the following section proposed for repeal will not be published. The section may be examined in the offices of the Texas Commission on Environmental Quality or in the Texas Register office, Room 245, James Earl Rudder Building, 1019 Brazos Street, Austin, Texas.)

Statutory Authority

The repealed rule is proposed under the following statutory authority: Texas Water Code (TWC), §5.103, which provides the commission with authority to adopt any rules necessary to carry out its powers, duties, and policies under this code and other laws of this state and to adopt rules when adopting, repealing, or amending any agency statement of general applicability that interprets or prescribes law or policy, or describes the procedures or practice requirements of an agency; §5.105, which authorizes the commission to establish and approve all general policy of the commission by rule; and §§7.001 *et seq.,* which establishes the commission's enforcement authority and provides specific requirements governing that authority. Additionally, the repealed rule is proposed under Texas Government Code, §2001.004, which requires state agencies to adopt rules of practice and procedure, and Texas Government Code, §2001.006, which authorizes state agencies to adopt rules or take other administrative action that the agency deems necessary to prepare to implement legislation.

The repealed rule implements TWC, §§7.057, 7.058, 7.059, 7.060, and 7.064.

§70.11. Notice of Decisions and Orders.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's legal authority to adopt.

Filed with the Office of the Secretary of State on March 29, 2012.

TRD-201201643
Kathleen C. Decker
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Texas Commission on Environmental Quality
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For further information, please call: (512) 239-2548

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CHAPTER 298. ENVIRONMENTAL FLOW STANDARDS FOR SURFACE WATER

The Texas Commission on Environmental Quality (TCEQ or commission) proposes to amend §298.290 and proposes new §§298.300, 298.305, 298.310, 298.315, 298.320, 298.325, 298.330, 298.335, 298.340, 298.350, 298.355, 298.360, 298.365, 298.370, 298.375, 298.380, 298.385, and 298.390.

Background and Summary of the Factual Basis for the Proposed Rules

In 2007, the 80th Legislature passed House Bill 3 (HB 3), relating to the management of the water resources of the state, including the protection of instream flows and freshwater inflows; and Senate Bill 3 (SB 3), relating to the development, management, and preservation of the water resources of the state. Both of these bills amended Texas Water Code (TWC), §11.1471, which requires the commission to adopt rules related to environmental flow standards and set-asides. The commission is proposing to implement the environmental flow provisions of HB 3, Article 1, and SB 3, Article 1, and proposes environmental flow standards for the Colorado and Lavaca Rivers, their associated tributaries, and Matagorda and Lavaca Bays; and the Guadalupe, San Antonio, Mission, and Aransas Rivers, their associated tributaries, and Mission, Copano, Aransas, and San Antonio Bays.

Prior to HB 3/SB 3, the commission had authority to protect environmental interests as it permitted state surface water. The commission had authority to maintain: existing instream uses under TWC, §11.147(d); water quality under TWC, §11.147(d) and §11.150; fish and wildlife habitat under TWC, §11.147(e) and §11.152; and freshwater inflows to bay and estuary systems under TWC, §11.147(a) - (c). TWC, §11.147(b) - (e) and §11.152 required that these environmental considerations be included only to the extent practicable or reasonable and required that environmental considerations be considered along with other factors of public welfare. HB 3/SB 3 did not make major changes to this commission authority.

The commission also retains its ability, granted prior to HB 3/SB 3, to place special conditions in water right permits to protect environmental interests. Before HB 3/SB 3, TWC, §11.134(b)(3)(D), required consideration of environmental interests for new appropriations of water, including amendments that granted an increase in the amount of water that could be diverted, and TWC, §11.085, required consideration of environmental interests for interbasin transfers. Permits for water projects that call for the re-diversion of wastewater or return flows to a watercourse, so called "indirect reuse" projects, were also subject to special conditions to protect environmental uses under TWC, §11.042 and §11.046. Amendments that were not new appropriations were required to be authorized if, among other criteria, the amendment would not cause adverse impact to the environment of greater magnitude than under the original permit under TWC, §11.122(b). As a practical matter, if any adverse impact to the environment was noted in an application for an amendment, then special conditions were crafted to remove the adverse impact so that the amendment might be granted.

HB 3/SB 3 changed the process by which the state would decide the flow that needed to be preserved in the watercourse for the environment and the balancing of environmental interests along with other public interests. HB 3/SB 3 created a statewide Environmental Flows Advisory Group (Advisory Group). The Advisory Group was given the responsibility to appoint Basin and Bay Area Stakeholder Committees (the stakeholder committee) for each of the state's river basin, bay, and estuary systems. The stakeholder committees, in turn, appointed a Basin and Bay Expert Science Team (the science team). The science teams were to develop a recommended environmental flow regime, or schedule of flow quantities adequate to support a sound ecological environment. The stakeholders were to take the science team's recommendations and consider those recommendations in conjunction with other factors, including the present and future needs for water for other uses. The stakeholders were also to report their recommendations to the commission. Both the science teams and the stakeholder committees were to reach their recommendations on a consensus basis to the maximum extent possible. The commission, in turn, is to take the recommendations from the science team, the stakeholder committees, the Advisory Group, and a statewide Science Advisory Committee (SAC), and consider that information along with other information and by rule adopt environmental flow standards for each basin and bay system. At the same time the commission is to establish an amount of unappropriated water, if available, to be set aside to satisfy the environmental flow standards to the maximum extent reasonable when considering human water needs. Once the environmental flow standards are adopted, the commission's objective or goal will be to protect the standards, along with the interests of senior water right holders, in its water rights permitting process for new appropriations and amendments that increase the amount of water to be taken, stored, or diverted. Under HB 3/SB 3, the commission may use the set-aside or use its existing authority to place special conditions in permits to protect the environmental flow standards.

The commission received the Colorado and Lavaca Rivers and Matagorda and Lavaca Bays science team report on March 1, 2011, and the stakeholder committee report on August 31, 2011. The commission received the Guadalupe, San Antonio, Mission, and Aransas Rivers and Copano, Aransas, and San Antonio Bays science team report on March 1, 2011, and the stakeholder committee report on September 1, 2011. Copies of the Colorado and Lavaca Rivers and Matagorda and Lavaca Bays reports are available on the following Web site: *http://www.tceq.texas.gov/permitting/water_rights/eflows/colorado-lavaca-bbsc.*

Copies of the Guadalupe, San Antonio, Mission, and Aransas Rivers and Mission, Copano, Aransas, and San Antonio Bays reports are available on the following Web site: *http://www.tceq.texas.gov/permitting/water_rights/eflows/guadalupe-sanantonio-bbsc.*

The commission proposes Subchapter D to cover the Colorado and Lavaca Rivers and Matagorda and Lavaca Bays. The commission proposes Subchapter E to cover the Guadalupe, San Antonio, Mission, and Aransas Rivers and Mission, Copano, Aransas, and San Antonio Bays.

HB 3/SB 3 also added TWC, §11.02362(p), which recognized the importance of adaptive management and provided that after submitting its recommendations regarding environmental flow standards and strategies to meet the environmental flow standards to the commission, each stakeholder committee prepare and submit a work plan for approval by the advisory group. The work plan is to establish a periodic review of the basin and bay environmental flow analyses and environmental flow regime recommendations, environmental flow standards, and strategies, prescribe specific monitoring, studies, and activities; and establish a schedule for continuing the validation or refinement of the basin and bay environmental flow analyses and environmental flow regime recommendations, the environmental flow standards adopted by the commission, and the strategies to achieve those standards.

The environmental flow standards for the Sabine and Neches Rivers and Sabine Lake Bay were adopted on April 20, 2011 and effective on May 15, 2011. On September 8, 2011, the advisory group approved a work plan and work plan addendum submitted by the Sabine and Neches Rivers and Sabine Lake Bay stakeholders. The work plan recommends a schedule for review of the environmental flow analyses and environmental flow regime recommendations, environmental flow standards, and strategies.

Therefore, the commission is proposing to amend §298.290 for the Sabine and Neches Rivers and Sabine Lake Bay to change the schedule for revision of the standards.

Section by Section Discussion

Subchapter C. Sabine and Neches Rivers, and Sabine Lake Bay

§298.290. Schedule for Revision of Standards.

The commission proposes to amend §298.290 to provide for a changed schedule for re-examination of the environmental flow standards. On September 8, 2011, the advisory group approved a work plan and work plan addendum submitted by the Sabine and Neches Rivers and Sabine Lake Bay stakeholders. The work plan proposes a schedule for review of the environmental flow analyses and environmental flow regime recommendations, environmental flow standards, and strategies. The stakeholders proposed that the environmental flow standards be reviewed on a five-year cycle integrated with the SB 1 (75th Legislature, 1997) Regional Water Planning five-year cycle. The work plan proposes that the SB 3 five-year periodic review schedule be aligned so that the review is available for consideration by the Regional Planning Groups to consider in each round of Regional Water Planning.

Based on the approved work plan, the commission proposes that the stakeholders submit their review of the environmental flow analyses and environmental flow regime recommendations, environmental flow standards, and strategies, for the Sabine and Neches Rivers and Sabine Lake Bay, by September 15, 2013, and every five years thereafter, and that rule revisions, if any, be adopted by the commission within one year of the submittal of the stakeholder's review.

Subchapter D. Colorado and Lavaca Rivers, and Matagorda and Lavaca Bays

The commission proposes Subchapter D to contain all of the environmental flow standards and rules specific to the basin and bay system composed of the Colorado and Lavaca Rivers, their associated tributaries, and Matagorda and Lavaca Bays. The science team delivered its report to the commission on March 1, 2011. The stakeholder committee delivered its recommendations to the commission on August 31, 2011. The commission must now adopt environmental flow standards under TWC, §11.02362(d). This proposed new subchapter would implement the schedule established by the Advisory Group under TWC, §11.02362, and environmental flow standards required of the commission in TWC, §11.1471. The commission specifically invites commenters to provide any relevant information that may differ from its proposed standards, which in the commenter's opinion would assist the commission in deciding on final environmental flow standards. The final environmental flow standards may either be higher or lower than the environmental flow standards in this proposed rule.

The final environmental flow standards may either be higher or lower than the environmental flow standards in this proposed rule and may include additional components such as more levels of pulse flows, an additional large inflow pulse to Lavaca Bay, and a narrative standard for inflows to East Matagorda Bay consistent with the recommendations of the stakeholder committee. The commission invites comments on all aspects of the full stakeholder committee recommendations.

§298.300. Applicability and Purpose.

The commission proposes new §298.300 to describe the purpose of Subchapter D and under what circumstances it applies.

§298.305. Definitions.

The commission proposes new §298.305. The proposed section has definitions of terms that will apply only to this subchapter. The commission acknowledges that overbank flows and flushing flows for the bays and estuaries are considered to be components of a flow regime for a sound ecological environment. However, these flows result from naturally occurring large rainfall events, which will likely continue to occur. Therefore, the commission is not including overbank flows or flushing flows as a component of the proposed standards. In §298.305(1), (7), (9), (13), and (17) the commission proposes definitions for "annual average inflow," "fall season quantity," "intervening season quantity," "monthly strategy threshold inflow," and "spring season quantity" because the proposed freshwater inflow standards for Matagorda Bay vary by season and year. In §298.305(2) and (11) the commission proposes definitions for "annual strategy frequency," and "long-term annual strategy quantity." These frequencies and quantities are used for the sole purpose of providing additional freshwater inflows to Matagorda and Lavaca Bays through voluntary strategies. In §298.305(3), (4), (14), and (20) the commission proposes definitions for "average condition," "dry condition," "severe condition," and "wet condition." A range of flow conditions - average, dry, severe, and wet - is proposed to be defined as the stakeholders recommended. In §298.305(5), (15), (19), and (21) the commission proposes definitions for the seasons "fall," "spring," "summer," and "winter" because the proposed environmental flow standards for this basin and bay system vary by season. The definitions are the same as the definitions of the seasons in the recommendations of the science team, which were subsequently used by the stakeholders to develop their recommendations. In §298.305(6), (8), and (16) the commission proposes definitions for "fall inflow quantity," "intervening inflow quantity," and "spring inflow quantity" because the proposed freshwater inflow standards for Lavaca Bay vary by season and year. In §298.305(10) the commission proposes a definition for "inflow regime level" because the proposed freshwater inflow standards for Matagorda and Lavaca Bays include multiple levels of freshwater inflows. In §298.305(12) the commission proposes a definition for "modeled annual frequency" because the frequencies at which specific levels of freshwater inflows occur in the commission's water availability models (WAMs) differ from the frequencies based on gaged flows used for the purpose of providing additional freshwater inflows to Matagorda and Lavaca Bays through voluntary strategies. Finally, in §298.305(18) the commission proposes a definition for "sound ecological environment" for this basin and bay system. This proposed definition is based on the definition recommended by the science team.

§298.310. Findings.

The commission proposes new §298.310 regarding findings related to sound ecological environments. The proposed finding regarding the ecological environment is consistent with the science team and stakeholder reports. Information on the commission's reasoning for the proposed schedule of flow quantities and environmental flow standards can be found in this preamble under the analyses for §§298.320, 298.325, and 298.330. This proposed new section would implement TWC, §11.1471.

§298.315. Set-Asides and Standards Priority Date.

The commission proposes new §298.315 which establishes the priority date for any set-asides and any modeling of the environmental flow standards in the commission's WAMs as the date the commission received the report from the science team for the basin and bay system, which was March 1, 2011. The commission intends to protect high flow pulse standards from being permitted to smaller applicants for new appropriations because under proposed §298.335(c), the high flow pulse standards would not be included in some water right permits for new appropriations. In addition, the commission needs to ensure that new appropriations, or amendments to add a new appropriation, will not affect downstream flow standards at measurement points that may not be applicable to those new appropriations or amendments. The commission also adds these changes to ensure consistency with the adopted §298.20.

§298.320. Calculation of Hydrologic Conditions.

The commission proposes new §298.320 to explain the determination of hydrologic conditions for implementation and application of the standards to water right permits to which the proposed standards apply. The hydrologic conditions are based on the recommendations of the stakeholders, and are calculated from actual gaged flows or reservoir storage. Implementation of hydrologic conditions in the commission's WAMs, used in the availability determination for water rights permitting for the river basins subject to this subchapter may result in different cumulative streamflows, reservoir storage, or reservoir elevation than those described in this section. The commission proposes that, for purposes of water availability determinations, hydrologic conditions used in the commission's WAMs will be calculated using the applicable frequencies for hydrologic conditions recommended by the stakeholders and the WAM simulated flows or reservoir storage.

§298.325. Schedule of Flow Quantities.

The commission proposes new §298.325 regarding the schedule of flow quantities. The commission proposes this section to explain the implementation of the environmental flow standards in the following section. The commission does not necessarily intend to use the exact wording of this section as the wording in water right permits issued after the adoption of these rules. However, this section describes how the commission intends to implement the proposed environmental flow standards in water right permits or amendments for new appropriations.

Subsistence flows are the minimum flows below which the commission will not allow diversions or storage of water. Therefore, the water right holder may not divert or store water if the flow at the applicable measurement point is below the subsistence flow standard. During severe hydrologic conditions, if the flow is above the subsistence flow standard but below the dry base flow standard, the water right holder may divert or store water down to the subsistence flow standard. The commission proposes that the subsistence flow standard can be variable depending on the season, and that only the subsistence flow for a particular season limits diversions by a water right subject to the standards, in that season.

During dry, average, or wet hydrologic conditions, a water right holder may not divert water when the flow is below the base flow standard for that season. Once the flow at the applicable measurement point is above the base flow standard for the season, the water right holder may store or divert water according to its permit as long as the flow at the measurement point does not fall below the applicable base flow standard for that season and in accordance with the applicable hydrologic condition as set out in §298.320.

The commission proposes that pulse flows be allowed to pass if streamflows are above the base or subsistence flow standard for the season and if the pulse flow trigger level is reached at the measurement point. The commission proposes that, for measurement points on the Colorado River below Lake Travis, once the pulse flow trigger conditions are met, the water right owner may not store or divert water unless the daily average flow is at or above the pulse flow trigger level and the applicable pulse duration has occurred. For all other measurement points, once the pulse flow trigger conditions are met, the water right holder may not store or divert water until either the applicable pulse volume passes the applicable measurement point or the applicable pulse duration has occurred.

The commission does not propose that the water right holder be required to produce a pulse flow because pulses occur when there are high rainfall events. The commission does propose that during these high rainfall events, the applicable high flow pulse be allowed to pass downstream. A water right holder on the Colorado River below Lake Travis can divert water in excess of the applicable pulse requirement as long as those diversions do not prevent the occurrence of the pulse flow trigger level of the applicable pulse and as long as the duration requirement is met for the applicable pulse. The commission proposes that a water right holder on the Colorado River above Lake Travis, on tributaries of the Colorado River, in the Lavaca River Basin, or in the Colorado-Lavaca and Lavaca-Guadalupe Coastal Basins can divert water in excess of the applicable pulse flow trigger requirement as long as those diversions do not prevent the occurrence of the pulse flow trigger level of the applicable pulse and as long as the duration or volume requirement is met for the applicable pulse.

If, in a particular season, only one or none of the small seasonal high flow pulses identified in the commission's proposed rule is generated, there would be no need to "catch up" or allow more than the applicable number of high flow pulses to pass in the following season. There would also be no need to "catch up" or allow more than the applicable number of large seasonal or annual high flow pulses to pass. For the Colorado River below Lake Travis, there would also be no need to allow more than the applicable number of larger high flow pulses to pass. The commission agrees with the stakeholders that pulse flows not be tied to a hydrologic condition. In addition, the commission proposes that if the pulse requirements for a large high flow pulse event are satisfied and therefore this high flow pulse is allowed to pass, the requirements for smaller high flow pulse events during that season would be considered to be satisfied at the applicable measurement point.

The commission proposes that if a water right owner stored water at a previous time and complied with the applicable environmental flow requirements at that time, the water right owner would not need to comply with any environmental flow requirements in effect when subsequent use of that stored water occurs. The commission specifically requests comments on alternative ways to implement the environmental flow standards of §298.330.

§298.330. Environmental Flow Standards.

The commission proposes new §298.330 to provide the environmental flow standards of TWC, §11.1471, for the basin and bay system composed of the Colorado and Lavaca Rivers, associ-

ated tributaries, and Matagorda and Lavaca Bays. The commission based its decision on consideration of the recommendations from the stakeholders, sound science and other public interests and relevant factors.

The stakeholders expressed strong concerns about the reduction of freshwater inflows to East Matagorda Bay. The stakeholders adopted the following statement: "Strategies to maintain and increase freshwater inflows should be pursued to support a sound ecological environment within East Matagorda Bay." The stakeholders' intent was to avoid a further reduction of freshwater inflows, to the extent those reductions can be avoided, and that strategies should be pursued to provide additional freshwater inflows to East Matagorda Bay.

The proposed bay and estuary standards for Matagorda and Lavaca Bays generally track the recommendations of the stakeholders. The stakeholders recognized the role of environmental flow standards both in water rights permitting and in establishing targets for purposes of providing additional freshwater inflows through voluntary strategies. Based on this the stakeholders proposed a dual set of recommendations for freshwater inflows. The stakeholders proposed that, for purposes of water availability determinations, specific values based on the WAM in effect at the time they developed their recommendations be included in the proposed rule. The stakeholders recognized that the WAMs can change as new permits and amendments are added and for other reasons and, therefore, the commission does not propose to include specific frequencies for use in water availability determinations in the proposed rule. Instead, the commission proposes that new permits or amendments to increase the amount of water stored, taken, or diverted shall not decrease the long-term annual strategy quantity, as adjusted consistent with the stakeholders' recommendation, or the modeled annual frequency below the baseline values in the WAM in effect at the time the first application for a water right permit or amendment subject to this subchapter is considered. The commission further proposes that if strategies are implemented through a water right permit to provide additional freshwater inflows to Matagorda or Lavaca Bays, any subsequent new permits or amendments for new appropriations of water not be allowed to reduce the long-term annual quantity or the long-term annual frequency below the modeled levels that would occur with the permitted strategy in place. The stakeholders recommended that a flushing flow event be allowed to pass for Lavaca Bay. A flow event of the magnitude proposed by the stakeholders is the result of high rainfall events, which should continue to occur. In addition, events of this magnitude can result in out-of-bank flood events. Therefore, the commission did not include the flushing flow event in the proposed standards.

The measurement points and the proposed base flow and subsistence flow standards are those recommended by the stakeholders. The proposed high flow pulse standards are generally based on recommendations of the stakeholders. Although the stakeholders did not recommend overbank flows, the stakeholders recommended pulse trigger levels based on flood stage levels. These pulse trigger levels were intended to represent bankfull events. However, in many locations, flows at the flood stage could inundate low-lying areas and could therefore represent an event larger than the bankfull event. The commission reduced the trigger levels for some high flow pulses to the action stage level to ensure that application of the standards would not cause flooding. The action stage level is defined by the National Weather Service as the stage which, when reached by a rising stream, represents the level where the National Weather Service or a partner/user needs to take some type of mitigation action in preparation for possible significant hydrologic activity. In addition, at some locations, the stakeholders recommended pulse flows with return periods in excess of one year. With the exception of the lower Colorado River below Lake Travis, there was little site-specific information supporting these specific higher pulse flow levels and frequencies. The executive director also reviewed the impacts of greater than annual events on the remaining unappropriated water in these basins as discussed below. Based on these factors, and with the exception of measurement points on the lower Colorado River below Lake Travis, the commission did not include pulses with return periods longer than one year in the proposed rule. For measurement points on the Colorado River below Lake Travis, the commission proposes pulse flows with a return period longer than one year because those specific pulse flow levels were based on a site-specific study.

The stakeholders performed an analysis of the impacts of the proposed standards on future water supply needs, reviewed unappropriated water at various locations throughout the basin and bay system, and considered the results of these analyses in their recommendations. The executive director reviewed the information provided by the stakeholders. The executive director also performed his own analysis to address the issue of balancing human and other competing needs for water in the basin and bay system by examining the impact of the proposed standards on unappropriated flow in the river basins affected by the proposed rule. The executive director's analysis is not intended as a finding that water is available for specific projects. When applications for projects are evaluated, water availability is based on specific facts in those applications.

The executive director analyzed the impacts of the proposed standards on the remaining unappropriated water at representative measurement points in the Colorado and Lavaca River Basins and associated coastal basins. The executive director based his analysis on results from the WAMs used for his water availability determinations for new permits or amendments that request a new appropriation of water. The executive director calculated both the amount of unappropriated water at selected measurement points and the impact of the proposed standards on unappropriated water. The remaining unappropriated water in these basins, before application of the proposed standards, varied from less than 1% of the time to approximately 18% of the time at measurement points in the Colorado River basin and from 40% of the time to 60% of the time in the Lavaca River Basin and associated coastal basin streams. Unappropriated water in these basins generally occurs during times of higher flow; therefore, increasing pulse volumes and frequencies during wetter periods reduces the remaining unappropriated flow. The executive director evaluated the freshwater inflow standards recommended by the stakeholders and found that application of the standards resulted in some water available for appropriation during higher flow events. Copies of the WAMs used in this analysis are available at: *http://www.tceq.texas.gov/goto/eflows/rulemaking.*

The executive director performed water quality analyses to evaluate relationships between streamflow and the water quality parameters identified by the science team and to look for trends and criteria excursions. These analyses did not identify any areas of concern that need to be addressed through this rulemaking process. The executive director also considered whether reduction of the proposed standards would result in a significant increase in unappropriated water in these basins and found that

it did not. Based on the results of the analysis of unappropriated flow and the water quality analysis, the executive director determined that there would be no significant impact from implementation of the proposed standards.

The commission is not proposing to set aside any unappropriated water to protect the proposed environmental flow standards. Any unappropriated water that is available in these river basins is available only during relatively wet conditions. The commission's opinion is that the environmental flow standards may be adequately protected by special conditions in water right permits or amendments for new appropriations of water in these basins. Special conditions are a more effective method to maximize the use of water by allowing water to be used for dual purposes. Special conditions to protect environmental flows may allow water permitted to downstream senior water rights, as well as return flows and permitted but unused water, to satisfy the special conditions. This proposed new section would implement TWC, §11.1471.

§298.335. Water Right Permit Conditions.

The commission proposes new §298.335 relating to water right permit conditions. The proposed provision would require the commission to place special conditions in water right permits for new appropriations and amendments that would add additional appropriations to existing permits. The special conditions would be to protect the environmental flow standards established by the subchapter. Consistent with the recommendations of the stakeholders, the commission proposes that, with the exception of measurement points on the Colorado River below Lake Travis where the water right permit applicant proposes to store more than 2,500 acre-feet of water or divert water at a rate of more than 500 cubic feet per second, water right permits to divert or store water would contain special conditions adequate to protect the environmental flow standards. Water right permit applications on the Colorado River below Lake Travis, where the water right permit applicant proposes to store less than 2,500 acre-feet of water or to divert at a rate less than 500 cubic feet per second would not contain the special conditions relative to high flow pulses. This proposed new section would implement TWC, §11.134(b)(3)(D) and §11.1471.

§298.340. Schedule for Revision of Standards.

The commission proposes new §298.340 to provide the schedule for re-examination of the environmental flow standards. The commission proposes to take up a possible rulemaking to change the standards ten years from the effective date of the rules, unless the stakeholder committee submits a work plan approved by the advisory group that calls for a more frequent review. The commission notes that it is prohibited from providing that the rulemaking process occurs more frequently than once every ten years unless the stakeholders' work plan approved by the Advisory Group under TWC, §11.02362(p), calls for a more frequent schedule. The commission notes that, as of the time of proposal of these rules, it has not received an approved work plan from the stakeholder committee. The commission will consider changing this proposal on adoption of the rule if it has received an approved work plan by the date this rule is considered for adoption at a commission agenda. Should the commission receive an approved work plan after final adoption of this rule package, the commission is free to consider an amendment to this section and change the schedule more often than once every ten years. The proposed new section would implement TWC, §11.1471(f).

Subchapter E. Guadalupe, San Antonio, Mission, and Aransas Rivers, and Mission, Copano, Aransas, and San Antonio Bays

The commission proposes Subchapter E to contain all of the environmental flow standards and rules specific to the basin and bay system composed of the Guadalupe, San Antonio, Mission, and Aransas Rivers, their associated tributaries, and Mission, Copano, Aransas, and San Antonio Bays. The science team delivered its report to the commission on March 1, 2011. The stakeholder committee delivered its recommendations to the commission on September 1, 2011. The commission must now adopt environmental flow standards under TWC, §11.02362(d). This proposed new subchapter would implement the schedule established by the Advisory Group under TWC, §11.02362, and environmental flow standards required of the commission in TWC, §11.1471. The commission specifically invites commenters to provide any relevant information that may differ from its proposed standards, which in the commenter's opinion would assist the commission in deciding on final environmental flow standards. The final environmental flow standards may either be higher or lower than the environmental flow standards in this proposed rule and may include additional components such as additional levels of base flows at locations on the Guadalupe River and its tributaries, and additional levels of pulse flows consistent with the recommendations of the stakeholder committee. The commission invites comments on all aspects of the full stakeholder committee recommendations.

§298.350. Applicability and Purpose.

The commission proposes new §298.350 to describe the purpose of Subchapter E and under what circumstances it applies.

§298.355. Definitions.

The commission proposes new §298.355. The proposed section has definitions of terms that will apply only to this subchapter. The commission acknowledges that overbank flows are considered to be components of a flow regime for a sound ecological environment. However, these flows result from naturally occurring large rainfall events, which will likely continue to occur. Therefore, the commission is not including overbank flows as a component of the proposed standards. In §298.355(1), (2), and (10) the commission proposes definitions for "average condition," "dry condition," and "wet condition." A range of flow conditions - average, dry, and wet - is proposed to be defined as the stakeholders recommended. In §298.355(3), (6), (9), and (11) the commission proposes definitions for the seasons, "fall," "spring," "summer," and "winter" because the proposed environmental flow standards for this basin and bay system vary by season. The definitions are the same as the definitions of the seasons in the recommendations of the science team, which were subsequently used by the stakeholders to develop their recommendations. In §298.355(4) the commission proposes a definition for "inflow regime level" because the proposed freshwater inflow standards for San Antonio Bay and the Mission-Aransas Estuary include multiple levels of freshwater inflows that occur with specific frequencies. In §298.355(5) the commission proposes a definition for "modeled permitting frequency" for use in water rights permitting for applications which increase the amount of water authorized to be stored, taken, or diverted as described in §298.10. In §298.355(7) the commission proposes a definition for "sound ecological environment" for this basin and bay system. This proposed definition is based on the definition recommended by the science team. Finally, in §298.355(8) the commission proposes a definition for "strategy target frequency" to be used solely for the purpose of pursuing voluntary strategies

to provide additional freshwater inflow to the bays and estuaries covered in this subchapter.

§298.360. Findings.

The commission proposes new §298.360 regarding findings related to sound ecological environments. The proposed finding regarding the ecological environment is consistent with the science team and stakeholder reports. Information on the commission's reasoning for the proposed schedule of flow quantities and environmental flow standards can be found in this preamble under the analyses for §§298.370, 298.375, and 298.380. This proposed new section would implement TWC, §11.1471.

§298.365. Set-Asides and Standards Priority Date.

The commission proposes new §298.365 which establishes the priority date for any set-asides and any modeling of the environmental flow standards in the commission's WAMs as the date the commission received the report from the science team for the basin and bay system, which was March 1, 2011. The commission intends to protect high flow pulse standards by not permitting these flows to smaller applicants for new appropriations because under proposed §298.385(b), the high flow pulse standards would not be included in some water right permits for new appropriations. In addition, the commission needs to ensure that new appropriations, or amendments to add a new appropriation, will not affect downstream flow standards at measurement points that may not be applicable to those new appropriations or amendments. The commission also adds these changes to ensure consistency with the adopted §298.20.

§298.370. Calculation of Hydrologic Conditions.

The commission proposes new §298.370 to explain the determination of hydrologic conditions for implementation and application of the standards to water right permits to which the proposed standards apply. The method for determining hydrologic conditions, for water right permits to which hydrologic conditions are applicable, for use as special conditions in those water right permits, is based on the recommendations of the stakeholders. Implementation of hydrologic conditions in the commission's WAMs, used in the availability determination for water rights permitting, for the river and coastal basins for which hydrologic conditions are applicable may result in different cumulative streamflows than those derived for the purposes of developing special conditions for a water right permit to which those hydrologic conditions are applicable. The commission proposes that, for purposes of water availability determinations, hydrologic conditions used in the commission's WAMs will be calculated based on the period of record for the applicable WAM and using the applicable frequencies for hydrologic conditions recommended by the stakeholders and applied to the WAM simulated flows.

§298.375. Schedule of Flow Quantities.

The commission proposes new §298.375 regarding the schedule of flow quantities. The commission proposes this section to explain the implementation of the environmental flow standards in the following section. The commission does not necessarily intend to use the exact wording of this section as the wording in water right permits issued after the adoption of these rules. However, this section describes how the commission intends to implement the proposed environmental flow standards in water right permits or amendments applications for new appropriations.

Subsistence flows are the minimum flows below which the commission will not allow diversions or storage of water. Therefore, the water right holder may not divert or store water if the flow at the applicable measurement point is below the subsistence flow standard. For measurement points in the Guadalupe River Basin, the commission proposes that if the flow at the applicable measurement point is above the subsistence flow standard but below the applicable base flow standard, the water right holder must allow the applicable subsistence flow, plus 50% of the difference between measured streamflow and the applicable subsistence flow, to pass its measurement point, and any remaining flow may be diverted or stored. For measurement points in the San Antonio River Basin and the San Antonio-Nueces Coastal Basin, during dry hydrologic conditions, if the flow at the applicable measurement point is above the subsistence flow standard but below the applicable dry base flow standard, the water right holder must allow the applicable subsistence flow, plus 50% of the difference between measured streamflow and the applicable subsistence flow, to pass its measurement points, and any remaining flow may be diverted or stored. The commission proposes that the subsistence flow standard can be variable depending on the season, and that only the subsistence flow for a particular season limits diversions by a water right subject to the standards, in that season.

For measurement points in the Guadalupe River Basin, once the flow at the applicable measurement point is above the base flow standard for the season, the water right holder may store or divert water according to its permit as long as the flow at the measurement point does not fall below the applicable base flow standard for that season. For measurement points in the San Antonio River Basin and the San Antonio-Nueces Coastal Basin, during average or wet hydrologic conditions, a water right holder may not store or divert water when the flow at the applicable measurement point is below the base flow standard for that season. Once the flow at the applicable measurement point is above the base flow standard for the season, the water right holder may store or divert water according to its permit as long as the flow at the applicable measurement point does not fall below the applicable base flow standard for that season and in accordance with the applicable hydrologic condition as set out in §298.370.

The commission proposes that pulse flows be allowed to pass if streamflows are above the base or subsistence flow standard for the season, subject to the pulse flow exemption as described in §298.385(b) and if the pulse flow trigger level is reached at the measurement point. The commission also proposes that, for measurement points described in §298.380(c)(12) - (15), for large pulses, once the pulse flow trigger conditions are met, the water right owner may not store or divert water until the daily average flow is at or above the pulse flow trigger level and the applicable pulse duration has occurred. For all other measurement points and for small seasonal pulses at measurement points described in §298.380(c)(12) - (15), once the pulse flow trigger conditions are met, the water right holder may not store or divert water until either the applicable pulse volume passes the applicable measurement point or the applicable pulse duration has occurred.

The commission does not propose that the water right holder be required to produce a pulse flow because pulses occur when there are high rainfall events. The commission does propose that during these high rainfall events, the applicable high flow pulse be allowed to pass downstream. The commission proposes that a water right holder on the San Antonio River or Cibolo Creek can divert water in excess of the applicable large pulse flow trigger requirement as long as those diversions do not prevent the occurrence of the pulse flow trigger level of the appli-

cable large pulse and so long as the duration requirement is met for the applicable large pulse. The commission proposes that a water right holder on the San Antonio River or Cibolo Creek can divert water in excess of the applicable small pulse flow trigger requirement as long as those diversions do not prevent the occurrence of the small pulse flow trigger level and as long as the duration or volume requirement is met for the applicable small pulse. The commission also proposes that all other water right holders can divert water in excess of the applicable pulse requirement so long as those diversions do not prevent the occurrence of the pulse flow trigger level of the applicable pulse and as long as the duration or volume requirement is met for the applicable pulse.

If, in a particular season, only one of the small seasonal high flow pulses identified in the commission's proposed rule is generated, there would be no need to "catch up" or allow more than the applicable number of high flow pulses to pass in the following season. There would also be no need to "catch up" or allow more than the applicable number of large seasonal high flow pulses to pass. The commission agrees with the stakeholders that pulse flows not be tied to a hydrologic condition. In addition, the commission proposes that if the pulse requirements for a large seasonal high flow pulse event are satisfied and therefore this high flow pulse is allowed to pass, the requirements for smaller seasonal high flow pulse events during that season would be considered to be satisfied at the applicable measurement point.

The commission proposes that if a water right owner stored water at a previous time and complied with the applicable environmental flow requirements at that time, the water right owner would not need to comply with any environmental flow requirements in effect when subsequent use of that stored water occurs. The commission specifically requests comments on alternative ways to implement the environmental flow standards of §298.380.

§298.380. Environmental Flow Standards.

The commission proposes new §298.380 to provide the environmental flow standards of TWC, §11.1471, for the basin and bay system composed of the Guadalupe, San Antonio, Mission, and Aransas Rivers, their associated tributaries, and Mission, Copano, Aransas, and San Antonio Bays. The commission based its decision on consideration of the recommendations of stakeholders, sound science and other public interests and relevant factors.

The proposed bay and estuary standards for San Antonio Bay and the Mission-Aransas Estuary generally track the recommendations of the stakeholders. The commission agrees with the stakeholders that, for months where there is no freshwater inflow standard in the proposed rule, application of the proposed instream flow standards to water right applications subject to this subchapter should provide sufficient flow to the bays and estuaries. The stakeholders recognized the role of environmental flow standards in both water rights permitting and in establishing targets for purposes of providing additional freshwater inflows through voluntary strategies. Based on this, the stakeholders recommended a dual set of recommendations for freshwater inflows. The stakeholders proposed that, for purposes of water availability determinations, specific frequency values based on the WAM in effect at the time they developed their recommendations be included in the proposed rule. However, the stakeholders recognize that the WAMs change as new permits and amendments are added and for other reasons. Therefore, the commission does not propose to include specific frequencies for use in availability determinations in the proposed rule. The commission proposes that new permits or amendments to increase the amount of water stored, taken, or diverted shall not impair the frequency at which specific inflow regime levels occur by more than 10% from the baseline values in the commission's WAMs in effect at the time the first application for a water right permit or amendment subject to this subchapter is considered.

The stakeholders also proposed that, for new appropriations greater than 200 acre-feet per year, each applicant should dedicate the lesser of 10% of the project yield or 10% of the authorized annual diversion to the environment to provide additional freshwater inflows to the bays and estuaries. The stakeholders further recommended that the commission, through rulemaking, form a stakeholder advisory group to advise the commission on the 10% dedication. HB 3/SB 3 contemplates that environmental flow standards will be protective of the environment. Further, requiring this dedication would encourage applicants for new appropriations to request more water than they need. The commission's proposed standards are protective of the environment; therefore, the commission did not include a requirement for a 10% dedication, in the proposed standards and the commission does not propose to establish a stakeholder advisory group in this rulemaking. The commission further proposes that if strategies are implemented through a water right permit to provide additional freshwater inflows to San Antonio Bay or the Mission-Aransas Estuary, any subsequent new permits or amendments for new appropriations of water not be allowed to reduce the frequency at which inflow regime levels occur below the levels that would occur in the commission's WAM with the permitted strategy or strategies in place.

The measurement points and the proposed base flow and subsistence flow standards for the San Antonio River Basin and the San Antonio-Nueces Coastal Basin are those recommended by the stakeholders; however, some flow values were rounded. The proposed high flow pulse standards are generally based on recommendations of the stakeholders. At some locations, the stakeholders recommended pulse flows with durations in excess of one month. With the exception of the San Antonio River and Cibolo Creek, there was little site-specific information supporting specific high flow pulses, including pulses with long durations. Therefore, the commission did not include pulse flows with durations longer than 30 days in the proposed rule. The measurement points and the subsistence flow standards for the Guadalupe River Basin are those recommended by the stakeholders. The base flow standards and pulse flow values were adjusted based on the balancing analysis discussed further.

The stakeholders performed an analysis of the impacts of the proposed standards on future water supply needs and considered the results of these analyses in their recommendations. The executive director reviewed the information provided by the stakeholders. The executive director also performed his own analysis to address the issue of balancing human and other competing needs for water in the basin and bay system. The executive director's analysis is not intended as a finding that water is available for specific projects. When applications for projects are evaluated, water availability is based on specific facts in those applications.

The executive director's selected scenario for the balancing analysis is based on a hypothetical diversion of a large amount of water from the Guadalupe River Basin. For this evaluation, the executive director used the commission's WAM for the Guadalupe river basin and modified it by adding the selected

scenario. The executive director performed analyses to estimate water availability under three conditions: 1) no environmental flow requirements; 2) application of the commission's current default methodology; 3) application of the stakeholders' recommendation; and 4) application of the proposed environmental flow standard. Applying either no instream flow requirement or the default methodology produces annual availabilities of 59% and 30%, respectively. Application of the stakeholders' recommendation and of the proposed standards produces annual availabilities of less than 5% and 29%, respectively. The executive director applied the proposed standards for San Antonio Bay and found that application of the standards, as proposed in the rule, did not impact water availability for the scenario. Copies of the WAMs used in this analysis are available at: *http://www.tceq.texas.gov/goto/eflows/rulemaking.*

The executive director performed water quality analyses to evaluate relationships between streamflow and the water quality parameters identified by the science team and to look for trends and criteria excursions. These analyses did not identify any areas of concern that need to be addressed through this rulemaking process. The executive director also considered whether reduction of the proposed standards would result in a significant increase in the amount of water available for the scenario and found that it did not. Based on the results of these analyses, the executive director determined that there would be no significant impact from implementation of the proposed standards.

The commission is not proposing to set aside any unappropriated water to protect the proposed environmental flow standards. Any unappropriated water that is available in these river basins is available only during relatively wet conditions. The commission's opinion is that the environmental flow standards may be adequately protected by special conditions in water right permits or amendments for new appropriations of water in these basins. Special conditions are a more effective method to maximize the use of water by allowing water to be used for dual purposes. Special conditions to protect environmental flows may allow water permitted to downstream senior water rights, as well as return flows and permitted but unused water, to satisfy the special conditions. This proposed new section would implement TWC, §11.1471.

§298.385. Water Right Permit Conditions.

The commission proposes new §298.385 relating to water right permit conditions. The proposed provision would require the commission to place special conditions in water right permits for new appropriations and amendments that would add additional appropriations to existing permits. The special conditions would be to protect the environmental flow standards established by the subchapter. Consistent with the recommendations of the stakeholders, the commission proposes that, for water right permit applications where the diversion rate is less than 20% of a pulse flow trigger requirement, the water right permit or amendment would not include special conditions relative to that high flow pulse. This proposed new section would implement TWC, §11.134(b)(3)(D) and §11.1471.

§298.390. Schedule for Revision of Standards.

The commission proposes new §298.390 to provide the schedule for re-examination of the environmental flow standards. The commission proposes to take up a possible rulemaking to change the standards ten years from the effective date of the rules, unless the stakeholder committee submits a work plan approved by the advisory group that calls for a more frequent review. The commission notes that it is prohibited from providing that the rulemaking process occurs more frequently than once every ten years unless the stakeholders' work plan approved by the Advisory Group under TWC, §11.02362(p), calls for a more frequent schedule. The commission notes that, as of the time of proposal of these rules, it has not received an approved work plan from the stakeholder committee. The commission will consider changing this proposal on adoption of the rule if it has received an approved work plan by the date this rule is considered for adoption at a commission agenda. Should the commission receive an approved work plan after final adoption of this rule package, the commission is free to consider an amendment to this section and change the schedule more often than once every ten years. The proposed new section would implement TWC, §11.1471(f).

Fiscal Note: Costs to State and Local Government

Jeffrey Horvath, Strategic Planning and Assessment Section Analyst, has determined that for the first five-year period the proposed rules are in effect, no significant fiscal implications are anticipated for the agency or for other units of state or local government as a result of administration or enforcement of the proposed rules.

The proposed rulemaking implements SB 3 and HB 3 from the 80th Legislative Session by adopting appropriate environmental flow standards for the Colorado and Lavaca Rivers and Matagorda and Lavaca Bays, and the Guadalupe, San Antonio, Mission, and Aransas Rivers and Mission, Copano, Aransas, and San Antonio Bays. Any governmental entity that applies for a new appropriation of water could potentially be affected by the environmental flow standards, including river authorities, cities, and water districts. The proposed rulemaking also implements TWC, §11.02362(p) and §11.1471(f), for the Sabine and Neches Rivers and Sabine Lake Bay by amending §298.290 to change the schedule for revision of the existing standards.

The rulemaking does not propose any new fees nor does it change existing ones. The proposed rulemaking does propose specific standards that will be applied by TCEQ staff during the technical review of applications for new appropriations of state water. These proposed standards are the result of stakeholder recommendations and will replace the methodology currently used to determine streamflow requirements. Once the environmental flow standards are adopted, the standards will be a part of the commission's water rights permitting process.

The proposed standards may reduce the number of new appropriations and permit amendments that would increase the amount of water to be taken, stored, or diverted, and therefore could result in an applicant having to secure an additional source of water. However, under existing practice streamflow restrictions are currently applied to new appropriations of water. The environmental flow standards as proposed in the rule are expected to function similarly to current streamflow restrictions. Any affect of the proposed rules on an application for new appropriations would depend upon the type of application, the location of the application in the river basin, bay and estuary inflow requirements, and the overall water availability in that basin. In the Colorado and Lavaca River Basins, staff's preliminary analysis indicates that the impacts may be greater for applications for direct diversions than for applications that include storage. In the Guadalupe, San Antonio, Mission, and Aransas River Basins, staff's preliminary analysis indicates similar types of impacts.

Because the proposed standards are expected to function similarly to current streamflow restrictions for applications, the proposed standards are not expected to have significant fiscal implications for units of state or local government including river authorities, cities, or water districts. The amendment to §298.290 does not have fiscal implications for units of state or local government including river authorities, cities, or water districts because it only revises an existing schedule.

Public Benefits and Costs

Mr. Horvath has also determined that for each year of the first five years the proposed rules are in effect, the public benefit anticipated from the changes seen in the proposed rules will be to provide certainty for the state's water management and development as well as adequate protection of the state's streams, rivers, bays, and estuaries.

The proposed rules are not anticipated to have significant fiscal implications for businesses or individuals. The proposed rules will provide appropriate environmental flow standards for the river and bay systems of the Colorado and Lavaca Rivers, and the Guadalupe, San Antonio, Mission, and Aransas Rivers and Mission, Copano, Aransas, and San Antonio Bays. However, any business or individual who applies for a new appropriation of water could potentially be affected by the proposed environmental flow standards. The affect of the proposed rules on an applicant would depend on the type of application, the location in the river basin, bay and estuary inflow requirements, and the overall water availability in that basin.

In the Colorado and Lavaca River Basins and the Colorado-Lavaca and Lavaca-Guadalupe Coastal Basins, staff's preliminary analysis indicates that the impacts may be greater for applications for direct diversions than for applications that include storage. In the Guadalupe, San Antonio, Mission, and Aransas River Basins and Mission, Copano, Aransas, and San Antonio Bays, staff's preliminary analysis indicates similar types of impacts. In addition, bay and estuary inflow requirements would be considered in availability determinations for applications in the Colorado and Lavaca River Basins and in the Guadalupe, San Antonio, Mission, and Aransas River Basin and the amount of water granted in an application could be lower.

Because the proposed rules may affect new appropriations and amendments that increase the amount of water to be taken, stored, or diverted, an applicant may have to secure an additional source of water. If a business is a water supplier and applies for a new appropriation of water and the availability for the appropriation is reduced, then individual water customers may see an increase in costs for water. However, streamflow restrictions are currently applied to new appropriations of water and the proposed standards are expected to function similarly to current streamflow restrictions for applications. Therefore, the proposed standards are not expected to have significant fiscal implications for businesses and individuals. Further, the amendment to §298.290 does not have fiscal implications for businesses or individuals because it only revises an existing schedule.

Small Business and Micro-Business Assessment

No adverse fiscal implications are anticipated for small or micro-businesses as a result of the administration or implementation of the proposed rules. The proposed rules will provide appropriate environmental flow standards for the river and bay systems of the Colorado, Lavaca, Guadalupe, San Antonio, Mission, and Aransas River Basins and Mission, Copano, Aransas, and San Antonio Bays. The proposed rules may affect new appropriations and amendments that increase the amount of water to be taken, stored, or diverted, which could result in an applicant having to secure an additional source of water. However, because streamflow restrictions are currently applied to new appropriations of water under existing practice and the proposed environmental flow standards would function similarly to current streamflow restrictions, no adverse fiscal implications are anticipated for small or micro-businesses. Finally, the amendment to §298.290 does not have fiscal implications for small or micro-businesses because it only revises an existing schedule.

Small Business Regulatory Flexibility Analysis

The commission has reviewed this proposed rulemaking and determined that a small business regulatory flexibility analysis is not required because the proposed rules are not expected to adversely affect small or micro-businesses for the first five years that they are in effect. In addition, the proposed rules are required in order to implement state law and are necessary to protect public health, safety, and the environment.

Local Employment Impact Statement

The commission has reviewed this proposed rulemaking and determined that a local employment impact statement is not required because the proposed rules do not adversely affect a local economy in a material way for the first five years that the proposed rules are in effect.

Draft Regulatory Impact Analysis Determination

The commission evaluated these proposed rules and performed an analysis of whether these proposed rules require a regulatory impact analysis under Texas Government Code, §2001.0225. These rules are not a "major environmental rule" under Texas Government Code, §2001.0225 because although the specific intent of the rulemaking is to protect the environment, these rules do not potentially adversely affect in a material way the economy, or a sector of the economy. Also, the purpose of these rules is not to exceed a standard set by federal law, exceed an express requirement of state law, exceed a requirement of a delegation agreement or contract between the state and an agency of the federal government to implement a state and federal program, or to adopt rules solely under the general powers of the agency instead of specific state law. This rulemaking is specifically required by TWC, §11.1471. The purpose of these rules is to establish environmental flow standards and set-asides the Colorado and Lavaca Rivers, their associated tributaries, and Matagorda and Lavaca Bays; and the Guadalupe, San Antonio, Mission and Aransas Rivers, their associated tributaries, and Mission, Copano, Aransas, and San Antonio Bays as required by TWC, §11.1471(a). These rules also implement TWC, §11.02362(p) and §11.1471(f), to revise the schedule for review of the existing standards for the Sabine and Neches Rivers and Sabine Lake Bay. Therefore, no regulatory impact analysis is required under Texas Government Code, §2001.0225 for this rulemaking.

Written comments on the draft regulatory impact analysis determination may be submitted to the contact person at the address listed under the Submittal of Comments section of this preamble.

Takings Impact Assessment

The commission evaluated these proposed rules and performed analysis of whether these proposed rules constitute a takings under Texas Government Code, Chapter 2007. The specific purpose of these rules is to establish environmental flow standards and set-asides for the Colorado and Lavaca Rivers, their

associated tributaries, and Matagorda and Lavaca Bays; and the Guadalupe, San Antonio, Mission and Aransas Rivers, their associated tributaries, and Mission, Copano, Aransas, and San Antonio Bays, as expressly required by TWC, §11.1471(a). These rules also implement TWC, §11.02362(p) and §11.1471(f), to revise the schedule for review of the existing standards for the Sabine and Neches Rivers and Sabine Lake Bay. Promulgation and enforcement of these proposed rules would be neither a statutory nor a constitutional taking of private real property. Specifically, because under TWC, §11.147(e-1), these rules cannot be retroactively applied to water rights issued after September 1, 2007, the subject proposed regulations do not affect a landowner's rights in private real property. Thus, this rulemaking does not burden (constitutionally); nor restrict or limit the owner's right to existing property and reduce its value by 25% or more beyond that which would otherwise exist in the absence of the regulations.

Consistency with the Coastal Management Program

The commission reviewed the proposed rulemaking and found that the proposal is subject to the Texas Coastal Management Program (CMP) in accordance with the Coastal Coordination Act, Texas Natural Resources Code, §§33.201 *et seq.,* and, therefore, must be consistent with all applicable CMP goals and policies. The commission conducted a consistency determination for the proposed rules in accordance with Coastal Coordination Act Implementation Rules, 31 TAC §505.22, and found the proposed rulemaking is consistent with the applicable CMP goals and policies.

CMP goals applicable to the proposed rules include: 1) to protect, preserve, restore, and enhance the diversity, quality, quantity, functions, and values of coastal natural resource areas; and 2) to ensure sound management of all coastal resources by allowing for compatible economic development and multiple human uses of the coastal zone. CMP policies applicable to the proposed rules include those contained in 31 TAC §501.33. The proposed rules implement HB 3/SB 3, which established the environmental flows process to provide certainty in water management and development and to provide adequate protection of the state's streams, rivers, bays, and estuaries. Since one of the purposes of the proposed rules is to protect coastal natural resources, the rules are consistent with CMP goals and policies.

Promulgation and enforcement of these rules will not violate or exceed any standards identified in the applicable CMP goals and policies, because the proposed rules are consistent with these CMP goals and policies, because these rules do not create or have a direct or significant adverse effect on any coastal natural resource areas, and because one of the purposes of the proposed rules is to protect coastal natural resources.

Written comments on the consistency of this rulemaking may be submitted to the contact person at the address listed under the Submittal of Comments section of this preamble.

Announcement of Hearing

The commission will hold a public hearing on this proposal in Austin on May 8, 2012, at 2:00 p.m. in Building E, Room 201S, at the commission's central office located at 12100 Park 35 Circle. The hearing is structured for the receipt of oral or written comments by interested persons. Individuals may present oral statements when called upon in order of registration. Open discussion will not be permitted during the hearing; however, commission staff members will be available to discuss the proposal 30 minutes prior to the hearing.

Persons who have special communication or other accommodation needs who are planning to attend the hearing should contact Sandy Wong, Office of Legal Services, at (512) 239-1802. Requests should be made as far in advance as possible.

Submittal of Comments

Written comments may be submitted to Charlotte Horn, MC 205, Office of Legal Services, Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087 or faxed to (512) 239-4808. Electronic comments may be submitted at: *http://www5.tceq.texas.gov/rules/ecomments/.* File size restrictions may apply to comments being submitted via the eComments system. All comments should reference Rule Project Number 2011-059-298-OW. The comment period closes May 14, 2012. Copies of the proposed rulemaking can be obtained from the commission's Web site at *http://www.tceq.texas.gov/nav/rules/propose_adopt.html.* For further information, please contact Ron Ellis, Water Rights Permitting and Availability Section, at (512) 239-1282.

SUBCHAPTER C. SABINE AND NECHES RIVERS, AND SABINE LAKE BAY

30 TAC §298.290

Statutory Authority

The amended section is proposed under Texas Water Code (TWC), §5.102, concerning General Powers; §5.103, concerning Rules; and §5.105 concerning General Policy, which authorize the commission to adopt rules as necessary to carry out its power and duties under the TWC. The amended section is also proposed under TWC, §11.0235, concerning Policy Regarding Waters of the State; §11.02362(p) and (q) concerning Development of Environmental Flow Regime Recommendations; §11.147, concerning Effects of Permit on Bays and Estuaries and Instream Uses; and §11.1471, concerning Environmental Flow Standards and Set-Asides.

The proposed amended section implements TWC, §§11.0235, 11.0236(p) and (q), 11.147, and 11.1471.

§298.290. Schedule for Revision of Standards.

The adopted environmental flow standards or environmental flow set-asides [~~adopted herein~~] for the Sabine and Neches Rivers, their associated tributaries, and Sabine Lake Bay may be revised by the commission through the rulemaking process. The Sabine and Neches basin and bay area stakeholder committee shall submit their review of the adopted environmental flow standards by September 1, 2013, and every five years thereafter. If the stakeholder committee recommends revisions to the adopted environmental flow standards, and the commission agrees, the rulemaking process shall be undertaken in conjunction with the periodic review. The final revised rules shall be effective within one year of the stakeholder's submittal of their review of the adopted environmental flow standards. [~~The final revised rules shall be effective no sooner than ten years from the effective date of this rule, unless the Sabine and Neches basin and bay area stakeholder committee submits a work plan approved by the advisory group under Texas Water Code, §11.02362(p), that provides for a periodic review to occur more frequently. In that event, the commission may provide for the rulemaking process to be undertaken in conjunction with the periodic review if the commission determines that schedule to be appropriate.~~] The rulemaking process shall include participation by a balanced representation of stakeholders having interests in the Sabine and Neches Rivers, their associated tributaries, and Sabine Lake Bay.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's legal authority to adopt.

Filed with the Office of the Secretary of State on March 30, 2012.

TRD-201201668
Robert Martinez
Director, Environmental Law Division
Texas Commission on Environmental Quality
Earliest possible date of adoption: May 13, 2012
For further information, please call: (512) 239-0779

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SUBCHAPTER D. COLORADO AND LAVACA RIVERS, AND MATAGORDA AND LAVACA BAYS

30 TAC §§298.300, 298.305, 298.310, 298.315, 298.320, 298.325, 298.330, 298.335, 298.340

Statutory Authority

The new sections are proposed under Texas Water Code (TWC), §5.102, concerning General Powers; §5.103, concerning Rules; and §5.105 concerning General Policy, which authorize the commission to adopt rules as necessary to carry out its power and duties under the TWC. The new sections are also proposed under TWC, §11.0235, concerning Policy Regarding Waters of the State; §11.147, concerning Effects of Permit on Bays and Estuaries and Instream Uses; and §11.1471, concerning Environmental Flow Standards and Set-Asides.

The proposed new sections implement TWC, §§11.0235, 11.147, and 11.1471.

§298.300. Applicability and Purpose.

This subchapter contains the environmental flow standards for the Colorado and Lavaca Rivers, and Matagorda and Lavaca Bays. The provisions of this subchapter have control over any provisions of Subchapter A of this chapter (relating to General Provisions) that are inconsistent with this subchapter relating to environmental flow standards and regulation in the Colorado and Lavaca Rivers, and Matagorda and Lavaca Bays.

§298.305. Definitions.

The following words or phrases have the following meanings in this subchapter unless the context clearly indicates otherwise:

(1) Annual average inflow--the long-term average annual volume of freshwater inflows at the most downstream point in the Colorado River Basin.

(2) Annual strategy frequency--the frequencies at which specific levels of freshwater inflows occur and which are used for the sole purpose of providing additional freshwater inflows to Matagorda and Lavaca Bays through voluntary strategies.

(3) Average condition--for all measurement points, the hydrologic condition that would occur approximately 50% of the time.

(4) Dry condition--for all measurement points except those measurement points on the Colorado River below Lake Travis, the hydrologic condition that would occur approximately 20% of the time. For all measurement points on the Colorado River below Lake Travis, the hydrologic condition that would occur approximately 45% of the time.

(5) Fall--for the measurement points on the Colorado River and its tributaries above Lake Travis, the period of time September through October, inclusive, and for all other measurement points, the period of time September through November, inclusive.

(6) Fall inflow quantity--the maximum freshwater inflow quantity, at the most downstream point in the Lavaca River Basin and at the most downstream point on Garcitas Creek in the Lavaca-Guadalupe Coastal Basin, occurring during any period of three consecutive months beginning in the months of August, September, or October.

(7) Fall season quantity--the maximum freshwater inflow quantity, at the most downstream point in the Colorado River Basin, occurring during any three consecutive months during the period from August through December, inclusive.

(8) Intervening inflow quantity--the quantity of freshwater inflows, at the most downstream point in the Lavaca River Basin and at the most downstream point on Garcitas Creek in the Lavaca-Guadalupe Coastal Basin, occurring during the remaining six months of the calendar year, that were not included in the Fall Inflow or Spring Inflow for that calendar year.

(9) Intervening season quantity--the quantity of freshwater inflows, at the most downstream point in the Colorado River Basin, occurring during the six months of the calendar year that are not counted towards the fall season quantity or the spring season quantity for that year.

(10) Inflow regime level--the annual freshwater inflow pattern, at the most downstream point in the Colorado River Basin for Matagorda Bay, or at the most downstream point in the Lavaca River Basin and the most downstream point on Garcitas Creek in the Lavaca-Guadalupe Coastal Basin for Lavaca Bay, that includes a spring season quantity, a fall season quantity, and an intervening season quantity.

(11) Long-Term annual strategy quantity--the annual average volume of freshwater inflows, which is used for the sole purpose of providing additional freshwater inflows to Matagorda Bay through voluntary strategies.

(12) Modeled annual frequency--the frequency at which specific levels of freshwater inflows occur in the commission's water availability models for the Colorado and Lavaca river basins and the Colorado-Lavaca and Lavaca-Guadalupe coastal basins at the time the first water right application subject to this subchapter is processed.

(13) Monthly strategy threshold inflow--the total volume of freshwater inflows, at the most downstream point in the Colorado River Basin, in any calendar month, which is used for the sole purpose of providing additional freshwater inflows to Matagorda Bay through voluntary strategies.

(14) Severe condition--for all measurement points, the hydrologic condition that would occur approximately 5% of the time.

(15) Spring--the period of time March through June, inclusive.

(16) Spring inflow quantity--the maximum freshwater inflow quantity, at the most downstream point in the Lavaca River Basin and at the most downstream point on Garcitas Creek in the Lavaca-Guadalupe Coastal Basin, occurring during any period of three consecutive months beginning in the months of February, March, April, or May.

(17) Spring season quantity--the maximum freshwater inflow quantity, at the most downstream point in the Colorado River Basin, occurring during any three consecutive months during the period from January through July, inclusive.

(18) Sound ecological environment--characterized by flow regimes that support existing biological communities in rivers, riparian, bay, and estuary habitats.

(19) Summer--the period of time July through August, inclusive.

(20) Wet condition--for all measurement points except those measurement points on the Colorado River below Lake Travis, the hydrologic condition that would occur approximately 25% of the time.

(21) Winter--for the measurement points on the Colorado River above Lake Travis, the period of time November through February, inclusive, and for all other measurement points, the period of time December through February, inclusive.

§298.310. Findings.

(a) The Colorado and Lavaca Rivers and their associated tributaries and Matagorda and Lavaca Bays and their associated estuaries are healthy and sound ecological environments.

(b) For the Colorado and Lavaca Rivers, and their associated tributaries, the commission finds that these sound ecological environments can best be maintained by a set of flow standards that implement a schedule of flow quantities that contain subsistence flow, base flow, and high flow pulses at defined measurement points. Minimum flow levels for these components will vary by season and by year since the amount of precipitation and, therefore, whether a system is in subsistence or base flow conditions, will vary from year to year and within a year from season to season, and the number of pulses protected will also vary with the amount of precipitation.

(c) For Matagorda and Lavaca Bays, the commission finds that the sound ecological environment of Matagorda and Lavaca Bays can best be maintained by a set of freshwater inflow standards that include freshwater inflow quantities that vary by season.

§298.315. Set-Asides and Standards Priority Date.

The priority date for the environmental flow standards and set-asides established by this subchapter is March 1, 2011. The priority date for the environmental flow standards will be used in the water availability determination for a new appropriation or for an amendment to an existing water right that increases the amount of water authorized to be stored, taken, or diverted, and has no other purpose.

§298.320. Calculation of Hydrologic Conditions.

(a) For new water right authorizations which increase the amount of water authorized to be stored, taken, or diverted as described in §298.10 of this title (relating to Applicability), the determination of the hydrologic condition for a particular season shall be determined once per season. The conditions present on the last day of the month of the preceding season will determine the hydrologic condition for the following season. For each measurement point specified in this section, either cumulative streamflow for the previous 12 months, combined storage in major reservoirs, or reservoir elevation will determine the hydrologic condition, as described in subsections (b) - (d) of this section.

(b) For measurement points located on the Colorado River above Lake Travis and tributaries of the Colorado River, and in the Colorado-Lavaca and the Lavaca-Guadalupe Coastal Basins, cumulative streamflow for the preceding 12 months and the corresponding hydrologic conditions are:
Figure: 30 TAC §298.320(b)

(c) For measurement points located on the Colorado River below Lake Travis, the combined reservoir storage in Lakes Travis and Buchanan and the corresponding hydrologic conditions are:
Figure: 30 TAC §298.320(c)

(d) For measurement points located in the Lavaca River Basin, the reservoir elevation of Lake Texana and the corresponding hydrologic conditions are:
Figure: 30 TAC §298.320(d)

(e) For purposes of water availability determinations, for measurement points on the Colorado River above Lake Travis and tributaries of the Colorado River, and in the Lavaca River Basin and the Colorado-Lavaca and Lavaca-Guadalupe Coastal Basins, hydrologic conditions used in the commission's water availability models shall be calculated such that severe conditions occur approximately 5% of the time, dry conditions occur approximately 20% of the time, average conditions occur approximately 50% of the time, and wet conditions occur approximately 25% of the time.

(f) For purposes of water availability determinations, for measurement points on the Colorado River below Lake Travis, hydrologic conditions used in the commission's water availability models shall be calculated such that severe conditions occur approximately 5% of the time, dry conditions occur approximately 45% of the time, and average conditions occur approximately 50% of the time.

§298.325. Schedule of Flow Quantities.

(a) Schedule of flow quantities. The environmental flow standards adopted by this subchapter constitute a schedule of flow quantities made up of subsistence flow, base flow, and high flow pulses. Environmental flow standards are established at 21 separate measurement locations in §298.330 of this title (relating to Environmental Flow Standards).

(b) Subsistence flow. The applicable subsistence flow standard varies depending on the seasons as described in §298.305 of this title (relating to Definitions). For a water right holder to which an environmental flow standard applies, at a measurement point that applies to the water right, the water right holder may not store or divert water under severe hydrologic conditions, unless the flow at the measurement point is above the applicable subsistence flow standard for that point. During severe hydrologic conditions, if the flow at the measurement point is above the subsistence flow standard but below the applicable dry condition base flow standard, then the water right holder may divert or store water according to its permit, subject to senior and superior water rights, as long as the flow at the measurement point does not fall below the applicable subsistence flow standard.

(c) Base flow. The applicable base flow level varies depending on the seasons as described in §298.305 of this title and the hydrologic condition described in §298.320 of this title (relating to Calculation of Hydrologic Conditions). For a water right holder to which an environmental flow standard applies, at a measurement point that applies to the water right, the water right holder is subject to the base flow standard for the hydrologic condition prevailing at that time. For all measurement points except those on the Colorado River below Lake Travis, the water right will be subject to one of the following: a dry, an average, or a wet base flow standard. For all measurement points on the Colorado River below Lake Travis, the water right will be subject to either a dry or an average base flow standard. For a water right holder to which an environmental flow standard applies, at a measurement point that applies to the water right, when the flow at the applicable measurement point is above the applicable base flow standard, but below any applicable high flow pulse levels, the water right holder may store or divert water according to its permit, subject to senior and superior water rights, as long as the flow at the applicable measurement point does not fall below the applicable base flow standard for that hydrologic condition.

(d) High flow pulses. High flow pulses are relatively short-duration, high flows within the watercourse that occur during or immediately following a storm event.

(1) For measurement points on the Colorado River below Lake Travis, two pulses per season, one pulse per 18 months, and one pulse per two years are to be passed (i.e., no storage or diversion by an applicable water right holder), if applicable, and as described in §298.330 of this title, if streamflows are above the applicable subsistence or base flow standard, and if the applicable high flow pulse trigger level is met at the applicable measurement point. The water right holder shall not divert or store water until the daily average flow at the applicable measurement point equals at least the high flow pulse trigger level on consecutive days equaling the duration time except during times that streamflow at the applicable measurement point exceeds the applicable high flow pulse trigger level.

(2) For measurement points on the Colorado River above Lake Travis, tributaries of the Colorado River, and in the Lavaca River Basin and the Colorado-Lavaca and Lavaca-Guadalupe Coastal Basins, one or two pulses per season and one pulse per year are to be passed (i.e., no storage or diversion by an applicable water right holder), if applicable, and as described in §298.330 of this title, if streamflows are above the applicable subsistence or base flow standard, and if the applicable high flow pulse trigger level is met at the applicable measurement point. The water right holder shall not divert or store water until either the applicable volume amount has passed the applicable measurement point or the duration time has passed since the high flow pulse trigger level occurred except during times that streamflow at the applicable measurement point exceeds the applicable high flow pulse trigger level.

(3) If the applicable high flow pulse trigger level does not occur in a season, then the water right holder need not stop storing or diverting water to produce a high flow pulse. The water right holder is not required to release water lawfully stored to produce a high flow pulse.

(4) Each season is independent of the preceding and subsequent seasons with respect to high flow pulse frequency.

(5) High flow pulses are independent of the hydrologic conditions set out in §298.320 of this title.

(6) If a high flow pulse requirement for a one-per-season pulse is satisfied for a particular season, one of the two-per-season pulse requirements is also considered to be satisfied. When a pulse flow requirement for an annual pulse is satisfied in a particular season, the one-per-season pulse requirement and one of the two-per-season pulse requirements are also considered to be satisfied.

(e) Stored water. A water right owner that has stored water in accordance with the terms and conditions of its water right, including any applicable environmental flow requirement in effect at the time the water was stored, may divert, release, or use this water, even if the applicable environmental flow requirement is not met at the time of the subsequent diversion, release, or use of that stored water.

§298.330. Environmental Flow Standards.

(a) A water right application in the Colorado River Basin which increases the amount of water authorized to be stored, taken or diverted as described in §298.10 of this title (relating to Applicability) shall not cause or contribute to an impairment of the inflow regimes as described in the figure in this subsection. Impairment of the inflow regime shall be evaluated as part of the water availability determination for a new water right or amendment that is subject to this subchapter. For purposes of this subsection, impairment would occur if the application, when considered in combination with any authorizations subject to this subchapter, which were issued prior to this application, would:

(1) decrease the annual average freshwater inflow, at the most downstream point in the Colorado River Basin, below 60% of the long-term annual strategy quantity listed in Figure: 30 TAC §298.330(a)(2); or

(2) decrease the modeled annual frequency of any inflow regime.

Figure: 30 TAC §298.330(a)(2)

(b) To the extent that strategies are implemented through a water right permit or amendment to meet the freshwater inflow standards for Matagorda Bay, a water right application in the Colorado River Basin which increases the amount of water authorized to be stored, taken, or diverted as described in §298.10 of this title shall not reduce the long-term annual strategy quantity or the modeled annual frequency for any inflow regime level listed in Figure: 30 TAC §298.330(a)(2) below the long term annual strategy quantity or modeled annual frequency that would occur in the commission's water availability model with the permitted strategy or strategies in place.

(c) A water right application in the Lavaca River basin, or Garcitas Creek located in the Lavaca-Guadalupe Coastal Basin, which increases the amount of water authorized to be stored, taken or diverted as described in §298.10 of this title, shall not cause or contribute to an impairment of the inflow regimes as described in the figure in this subsection. Impairment of the inflow regime shall be evaluated as part of the water availability determination for a new water right or amendment that is subject to this subchapter. For purposes of this subsection, impairment would occur if the application, when considered in combination with any prior authorizations subject to this subchapter, would decrease the modeled annual frequency of any inflow regime level.

Figure: 30 TAC §298.330(c)

(d) To the extent that strategies are implemented through a water right permit or amendment to meet the freshwater inflow standards for Lavaca Bay, a water right application in the Lavaca River Basin, or on Garcitas Creek in the Lavaca-Guadalupe Coastal Basin, which increases the amount of water authorized to be stored, taken, or diverted as described in §298.10 of this title, shall not reduce the modeled annual frequency in the commission's water availability model for any inflow regime level listed in Figure: 30 TAC §298.330(c) below the level that would occur with the permitted strategy or strategies in place.

(e) The following environmental flow standards are established for the following described measurement points:

(1) Colorado River above Silver, Texas, generally described as United States Geological Survey (USGS) gage 08123850, and more specifically described as Latitude 32 degrees, 03 minutes, 13 seconds; Longitude 100 degrees, 45 minutes, 42 seconds.

Figure: 30 TAC §298.330(e)(1)

(2) Colorado River near Ballinger, Texas, generally described as USGS gage 08126380, and more specifically described as Latitude 31 degrees, 42 minutes, 55 seconds; Longitude 100 degrees, 01 minutes, 34 seconds.

Figure: 30 TAC §298.330(e)(2)

(3) Colorado River near San Saba, Texas, generally described as USGS gage 08147000, and more specifically described as Latitude 31 degrees, 13 minutes, 04 seconds; Longitude 98 degrees, 33 minutes, 51 seconds.

Figure: 30 TAC §298.330(e)(3)

(4) Elm Creek at Ballinger, Texas, generally described as USGS gage 08127000, and more specifically described as Latitude 31

degrees, 44 minutes, 57 seconds; Longitude 99 degrees, 56 minutes, 51 seconds.
Figure: 30 TAC §298.330(e)(4)

(5) Concho River at Paint Rock, Texas, generally described as USGS gage 08136500, and more specifically described as Latitude 31 degrees, 30 minutes, 57 seconds; Longitude 99 degrees, 55 minutes, 09 seconds.
Figure: 30 TAC §298.330(e)(5)

(6) South Concho River at Christoval, Texas, generally described as USGS gage 08128000, and more specifically described as Latitude 31 degrees, 11 minutes, 13 seconds; Longitude 100 degrees, 30 minutes, 06 seconds.
Figure: 30 TAC §298.330(e)(6)

(7) Pecan Bayou near Mullin, Texas, generally described as USGS gage 08143600, and more specifically described as Latitude 31 degrees, 31 minutes, 02 seconds; Longitude 98 degrees, 44 minutes, 25 seconds.
Figure: 30 TAC §298.330(e)(7)

(8) San Saba River at San Saba, Texas, generally described as USGS gage 08146000, and more specifically described as Latitude 31 degrees, 12 minutes, 47 seconds; Longitude 98 degrees, 43 minutes, 09 seconds.
Figure: 30 TAC §298.330(e)(8)

(9) Llano River at Llano, Texas, generally described as USGS gage 08151500, and more specifically described as Latitude 30 degrees, 45 minutes, 04 seconds; Longitude 98 degrees, 40 minutes, 10 seconds.
Figure: 30 TAC §298.330(e)(9)

(10) Pedernales River near Johnson City, Texas, generally described as USGS gage 08153500, and more specifically described as Latitude 30 degrees, 17 minutes, 30 seconds; Longitude 98 degrees, 23 minutes, 57 seconds.
Figure: 30 TAC §298.330(e)(10)

(11) Onion Creek near Driftwood, Texas, generally described as USGS gage 08158700, and more specifically described as Latitude 30 degrees, 04 minutes, 58 seconds; Longitude 98 degrees, 00 minutes, 27 seconds.
Figure: 30 TAC §298.330(e)(11)

(12) Colorado River at Bastrop, Texas, generally described as USGS gage 08159200, and more specifically described as Latitude 30 degrees, 06 minutes, 16 seconds; Longitude 97 degrees, 19 minutes, 09 seconds.

(A) United States Geological Survey Gage 08159200, Colorado River at Bastrop.
Figure: 30 TAC §298.330(e)(12)(A)

(B) United States Geological Survey Gage 08159200, Colorado River at Bastrop.
Figure: 30 TAC §298.330(e)(12)(B)

(13) Colorado River at Columbus, Texas, generally described as USGS gage 08161000, and more specifically described as Latitude 29 degrees, 42 minutes, 22 seconds; Longitude 96 degrees, 32 minutes, 12 seconds.

(A) United States Geological Survey Gage 08161000, Colorado River at Columbus.
Figure: 30 TAC §298.330(e)(13)(A)

(B) United States Geological Survey Gage 08161000, Colorado River at Columbus.
Figure: 30 TAC §298.330(e)(13)(B)

(14) Colorado River at Wharton, Texas, generally described as USGS gage 08162000, and more specifically described as Latitude 29 degrees, 18 minutes, 32 seconds; Longitude 96 degrees, 06 minutes, 13 seconds.

(A) United States Geological Survey Gage 08162000, Colorado River at Wharton.
Figure: 30 TAC §298.330(e)(14)(A)

(B) United States Geological Survey Gage 08162000, Colorado River at Wharton.
Figure: 30 TAC §298.330(e)(14)(B)

(15) Lavaca River near Edna, Texas, generally described as USGS gage 08164000, and more specifically described as Latitude 28 degrees, 57 minutes, 35 seconds; Longitude 96 degrees, 41 minutes, 10 seconds.
Figure: 30 TAC §298.330(e)(15)

(16) Navidad River at Strane Park near Edna, Texas, generally described as USGS gage 08164390, and more specifically described as Latitude 29 degrees, 03 minutes, 55 seconds; Longitude 96 degrees, 40 minutes, 26 seconds.
Figure: 30 TAC §298.330(e)(16)

(17) Sandy Creek near Ganado, Texas, generally described as USGS gage 08164450, and more specifically described as Latitude 29 degrees, 09 minutes, 36 seconds; Longitude 96 degrees, 32 minutes, 46 seconds.
Figure: 30 TAC §298.330(e)(17)

(18) East Mustang Creek near Louise, Texas, generally described as USGS gage 08164504, and more specifically described as Latitude 29 degrees, 04 minutes, 14 seconds; Longitude 96 degrees, 25 minutes, 01 seconds.
Figure: 30 TAC §298.330(e)(18)

(19) West Mustang Creek near Ganado, Texas, generally described as USGS gage 08164503, and more specifically described as Latitude 29 degrees, 04 minutes, 18.69 seconds; Longitude 96 degrees, 28 minutes, 04.90 seconds.
Figure: 30 TAC §298.330(e)(19)

(20) Garcitas Creek near Inez, Texas, generally described as USGS gage 08164600, and more specifically described as Latitude 28 degrees, 53 minutes, 28 seconds; Longitude 96 degrees, 49 minutes, 08 seconds.
Figure: 30 TAC §298.330(e)(20)

(21) Tres Palacios River near Midfield, Texas, generally described as USGS gage 08162600, and more specifically described as Latitude 28 degrees, 55 minutes, 40 seconds; Longitude 96 degrees, 10 minutes, 15 seconds.
Figure: 30 TAC §298.330(e)(21)

§298.335. Water Right Permit Conditions.

(a) For water right permits with an authorization to store or divert water from the Colorado River above Lake Travis, tributaries of the Colorado River, the Lavaca River Basin, and the Colorado-Lavaca and Lavaca-Guadalupe Coastal Basins, except for water right permits located below Lake Travis on the Colorado River, and to which the environmental flow standards apply, that are issued after the effective date of this subchapter, the water right permit or amendment shall contain flow restriction special conditions that are adequate to protect the environmental flow standards of this subchapter.

(b) For water right permits with an authorization to divert at a rate greater than 500 cubic feet per second (cfs) or to store more than 2,500 acre-feet in an on-channel reservoir, on the Colorado River below Lake Travis, and to which the environmental flow standards apply, that

are issued after the effective date of this subchapter, the water right permit or amendment shall contain flow restriction special conditions that are adequate to protect the environmental flow standards of this subchapter.

(c) For water right permits with an authorization to divert at a rate less than 500 cfs or to store less than 2,500 acre-feet in an on-channel reservoir, on the Colorado River below Lake Travis, and to which the environmental flow standards apply, that are issued after the effective date of this subchapter, the water right permit or amendment shall contain flow restriction special conditions that are adequate to protect the environmental flow standards of this subchapter; however, no special conditions are necessary to preserve or pass high flow pulses.

§298.340. Schedule for Revision of Standards.

The environmental flow standards or environmental flow set-asides adopted in this subchapter for the Colorado and Lavaca River Basins, the Colorado-Lavaca and Lavaca-Guadalupe Coastal Basins, and Matagorda and Lavaca Bays may be revised by the commission through the rulemaking process. The final revised rules shall be effective no sooner than ten years from the effective date of this rule, unless the Colorado and Lavaca Basin and Bay Area Stakeholder Committee submits a work plan approved by the Environmental Flows Advisory Group under Texas Water Code, §11.02362(p), that provides for a periodic review to occur more frequently. The rulemaking process shall include participation by a balanced representation of stakeholders having interests in the Colorado and Lavaca River Basins, the Colorado-Lavaca and Lavaca-Guadalupe Coastal Basins, and Matagorda and Lavaca Bays.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's legal authority to adopt.

Filed with the Office of the Secretary of State on March 30, 2012.

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Robert Martinez
Director, Environmental Law Division
Texas Commission on Environmental Quality
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For further information, please call: (512) 239-0779

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SUBCHAPTER E. GUADALUPE, SAN ANTONIO, MISSION, AND ARANSAS RIVERS, AND MISSION, COPANO, ARANSAS, AND SAN ANTONIO BAYS

30 TAC §§298.350, 298.355, 298.360, 298.365, 298.370, 298.375, 298.380, 298.385, 298.390

Statutory Authority

The new sections are proposed under Texas Water Code (TWC), §5.102, concerning General Powers; §5.103, concerning Rules; and §5.105 concerning General Policy, which authorize the commission to adopt rules as necessary to carry out its power and duties under the TWC. The new sections are also proposed under TWC, §11.0235, concerning Policy Regarding Waters of the State; §11.147, concerning Effects of Permit on Bays and Estuaries and Instream Uses; and §11.1471, concerning Environmental Flow Standards and Set-Asides.

The proposed new sections implement TWC, §§11.0235, 11.147, and 11.1471.

§298.350. Applicability and Purpose.

This subchapter contains the environmental flow standards for the Guadalupe, San Antonio, Mission, and Aransas Rivers, their associated tributaries, and Mission, Copano, Aransas, and San Antonio Bays. The provisions of this subchapter control over any provisions of Subchapter A of this chapter (relating to General Provisions) that are inconsistent with this subchapter relating to environmental flow standards and regulation in the Guadalupe, San Antonio, Mission, and Aransas Rivers, their associated tributaries, and Mission, Copano, Aransas, and San Antonio Bays.

§298.355. Definitions.

The following words or phrases have the following meanings in this subchapter unless the context clearly indicates otherwise:

(1) Average condition--for all measurement points for which a hydrologic condition is applicable, the hydrologic condition that would occur approximately 50% of the time.

(2) Dry condition--for all measurement points for which a hydrologic condition is applicable, the hydrologic condition that would occur approximately 25% of the time.

(3) Fall--the period of time October through December, inclusive.

(4) Inflow regime level--a freshwater inflow pattern, at the most downstream point in the Guadalupe and San Antonio River Basins for San Antonio Bay, or at the most downstream points in the San Antonio-Nueces Coastal Basin for the Mission-Aransas Estuary, that includes quantities and frequencies.

(5) Modeled permitting frequency--the frequencies at which specific volumes of freshwater inflows occur in the commission's water availability models for the river basins included in this subchapter.

(6) Spring--the period of time April through June, inclusive.

(7) Sound ecological environment--maintains, to some reasonable level, the physical, chemical, and biological attributes and processes of the natural system.

(8) Strategy target frequency--the frequencies at which specific volumes of freshwater inflows occur, and which are used for the sole purpose of providing additional freshwater inflows to the bays and estuaries included in this subchapter through voluntary strategies.

(9) Summer--the period of time July through September, inclusive.

(10) Wet condition--for all measurement points for which a hydrologic condition is applicable, the hydrologic condition that would occur approximately 25% of the time.

(11) Winter--the period of time January through March, inclusive.

§298.360. Findings.

(a) The Guadalupe, San Antonio, Mission, and Aransas Rivers, their associated tributaries, Mission, Copano, Aransas, and San Antonio Bays, and the associated estuaries are substantially sound ecological environments.

(b) For the Guadalupe, San Antonio, Mission, and Aransas Rivers, and their associated tributaries, the commission finds that these sound ecological environments can best be maintained by a set of flow standards that implement a schedule of flow quantities that contain subsistence flow, base flow, and high flow pulses at defined measurement

points. Minimum flow levels for these components will vary by season and by year since the amount of precipitation and, therefore, whether a system is in subsistence or base flow conditions, will vary from year to year and within a year from season to season, and the number of pulses protected will also vary with the amount of precipitation.

(c) For Mission, Copano, Aransas, and San Antonio Bays, the commission finds that the sound ecological environment of these bays can best be maintained by a set of freshwater inflow standards that include freshwater inflow quantities that vary by season.

§298.365. Set-Asides and Standards Priority Date.

The priority date for the environmental flow standards and set-asides established by this subchapter is March 1, 2011. The priority date for the environmental flow standards will be used in the water availability determination for a new appropriation or for an amendment to an existing water right that increases the amount of water authorized to be stored, taken, or diverted and has no other purpose.

§298.370. Calculation of Hydrologic Conditions.

(a) For new water right authorizations in the San Antonio River Basin and the San Antonio-Nueces Coastal Basin which increase the amount of water authorized to be stored, taken, or diverted as described in §298.10 of this title (relating to Applicability), the determination of the hydrologic condition for a particular season shall be determined once per season. The conditions present on the last day of the month of the preceding season will determine the hydrologic condition for the following season for the applicable measurement point. For each measurement point specified in the applicable river or coastal basin, cumulative streamflow for the previous 12 months will determine the hydrologic condition.

(b) For purposes of permit special conditions related to hydrologic conditions, for water right applications in the San Antonio River Basin and the San Antonio-Nueces Coastal Basin, which increase the amount of water to be stored, taken, or diverted, the hydrologic condition shall be calculated using the full period of record for the United States Geological Survey (USGS) gage at each measurement point such that dry conditions occur approximately 25% of the time, average conditions occur approximately 50% of the time, and wet conditions occur approximately 25% of the time.

(c) For purposes of water availability determinations, for water right permit applications in the San Antonio River Basin and the San Antonio-Nueces Coastal Basin, which increase the amount of water to be stored, taken, or diverted, hydrologic conditions used in the commission's water availability models shall be calculated such that dry conditions occur approximately 25% of the time, average conditions occur approximately 50% of the time, and wet conditions occur approximately 25% of the time, based on the period of record and simulated flows of the applicable water availability model.

§298.375. Schedule of Flow Quantities.

(a) Schedule of flow quantities. The environmental flow standards adopted by this subchapter constitute a schedule of flow quantities made up of subsistence flow, base flow, and high flow pulses. Environmental flow standards are established for 16 measurement points in §298.380 of this title (relating to Environmental Flow Standards) and this section.

(b) Subsistence flow. The applicable subsistence flow standard varies depending on the seasons as described in §298.355 of this title (relating to Definitions). For a water right holder to which an environmental flow standard applies, at a measurement point that applies to the water right, the water right holder may not store or divert water, unless the flow at the measurement point is above the applicable subsistence flow standard for that point. For measurement points in the Guadalupe River Basin, if the flow at the applicable measurement point is above the subsistence flow standard but below the base flow standard, then the water right holder must allow the applicable subsistence flow, plus 50% of the difference between measured streamflow and the applicable subsistence flow, to pass its measurement point and any remaining flow may be diverted or stored, according to its permit, subject to senior and superior water rights, as long as the flow at the measurement point does not fall below the applicable subsistence flow standard. For measurement points in the San Antonio River Basin and the San Antonio-Nueces Coastal Basin, during dry hydrologic conditions, if the flow at the applicable measurement point is above the subsistence flow standard but below the applicable dry base flow standard, then the water right holder must allow the applicable subsistence flow, plus 50% of the difference between measured streamflow and the applicable subsistence flow, to pass its measurement points and any remaining flow may be diverted or stored, according to its permit, subject to senior and superior water rights, as long as the flow at the measurement point does not fall below the applicable subsistence flow standard.

(c) Base flow. The applicable base flow level varies depending on the seasons as described in §298.355 of this title, and the hydrologic condition described in §298.370 of this title (relating to Calculation of Hydrologic Conditions) for river and coastal basins to which a hydrologic condition applies. For a water right holder in the San Antonio River Basin or the San Antonio-Nueces Coastal Basin, to which an environmental flow standard applies, at a measurement point that applies to the water right, the water right holder is subject to the base flow standard for the hydrologic condition prevailing at that time, i.e., the water right holder will be subject to one of the following: a dry, an average, or a wet base flow standard. For a water right holder in the Guadalupe River Basin, to which an environmental flow standard applies, at a measurement point that applies to a water right, the water right holder is subject to a base flow standard. For a water right holder to which an environmental flow standard applies, at a measurement point that applies to the water right, when the flow at the applicable measurement point is above the applicable base flow standard, but below any applicable high flow pulse trigger levels, the water right holder may store or divert water according to its permit, subject to senior and superior water rights, as long as the flow at the applicable measurement point does not fall below the applicable base flow standard.

(d) High flow pulses. High flow pulses are relatively short-duration, high flows within the watercourse that occur during or immediately following a storm event.

(1) For measurement points in the Guadalupe River Basin, two pulses per season are to be passed (i.e., no storage or diversion by an applicable water right holder), if applicable, and as described in §298.380 of this title, if the flows are above the applicable base flow standard, and if the applicable high flow pulse trigger level is met at the applicable measurement point. The water right holder shall not divert or store water except during times that streamflow at the applicable measurement point exceeds the applicable high flow pulse trigger level and until either the applicable volume amount has passed the measurement point or the duration time has passed since the high flow pulse trigger level occurred.

(2) For measurement points in the San Antonio River Basin and the San Antonio-Nueces Coastal Basin, one, two, or three pulses per season are to be passed (i.e., no storage or diversion by an applicable water right holder), if applicable, and as described in §298.380 of this title, if the flows are above the applicable base flow standard, and if the applicable high flow pulse trigger level is met at the applicable measurement point. For the measurement points described in

§298.380(c)(12) - (15) of this title, the water right holder shall not divert or store water until the daily average flow at the applicable measurement point equals at least the large high flow pulse trigger level on consecutive days equaling the duration time, except during times that streamflow at the applicable measurement point exceeds the applicable high flow pulse trigger level. For all other measurement points in the San Antonio River Basin and the San Antonio-Nueces Coastal Basin and for small seasonal pulses at the measurement points described in §298.380(c)(12) - (15) of this title, the water right holder shall not divert or store water except during times that streamflow at the applicable measurement point exceeds the applicable high flow pulse trigger level and until either the applicable volume amount has passed the measurement point or the duration time has passed since the high flow pulse trigger level occurred.

(3) If the applicable high flow pulse flow trigger level does not occur in a season, then the water right holder need not stop storing or diverting to produce a high flow pulse. The water right holder is not required to release water lawfully stored to produce a high flow pulse.

(4) Each season is independent of the preceding and subsequent seasons with respect to high flow pulse frequency.

(5) High flow pulses are independent of the hydrologic conditions set out in §298.370 of this title, for measurement points for which a hydrologic condition is applicable. For all other measurement points, high flow pulses are applicable under both subsistence and base flow conditions.

(6) For measurement points in the San Antonio River Basin and the San Antonio-Nueces Coastal Basin, except those described in §298.380(c)(12) - (15) of this title, if a pulse flow requirement for a large seasonal pulse is satisfied for a particular season, one of the smaller pulse requirements is also considered to be satisfied. For measurement points described in §298.380(c)(12) - (15) of this title, if a pulse flow requirement for a large seasonal pulse is satisfied, all smaller pulse requirements for the applicable season are also considered to be satisfied.

(e) Stored water. A water right owner that has stored water in accordance with the terms and conditions of its water right, including any applicable environmental flow requirement in effect at the time the water was stored, may divert, release, or use this water, even if the applicable environmental flow requirement is not met at the time of the subsequent diversion, release, or use of that stored water.

§298.380. Environmental Flow Standards.

(a) A water right application in the Guadalupe and San Antonio River Basins and the San Antonio-Nueces Coastal Basin, which increases the amount of water authorized to be stored, taken, or diverted as described in §298.10 of this title (relating to Applicability), shall not cause or contribute to an impairment of the inflow regimes as described in the figures in this subsection. Impairment of the inflow regime shall be evaluated as part of the water availability determination for a new water right or amendment that is subject to this subchapter. For purposes of this subsection, impairment would occur if the application, when considered in combination with any authorizations subject to this subchapter, which were issued prior to this application, would impair the modeled permitting frequency of any inflow regime by more than 10%.

(1) Bay and Estuary Freshwater Inflow Standards for the San Antonio Bay System for the Spring Season.
Figure: 30 TAC §298.380(a)(1)

(2) Bay and Estuary Freshwater Inflow Standards for the San Antonio Bay System for the Summer Season.
Figure: 30 TAC §298.380(a)(2)

(3) Bay and Estuary Freshwater Inflow Standards for Mission and Aransas Bays for the Summer Season.
Figure: 30 TAC §298.380(a)(3)

(b) To the extent that strategies are implemented through a water rights permit or amendment to meet the freshwater inflow standards for San Antonio, Mission, Aransas, and Copano Bays, a water right application in the Guadalupe and San Antonio River Basins and the San Antonio-Nueces Coastal Basin, which increases the amount of water authorized to be stored, taken or diverted as described in §298.10 of this title, shall not reduce the modeled permitting frequency for any inflow regime level, listed in Figure: 30 TAC §298.380(a)(1), Figure: 30 TAC §298.380(a)(2), and Figure: 30 TAC §298.380(a)(3), below the level that would occur with the permitted strategy or strategies in place.

(c) The following environmental flow standards are established for the following described measurement points:

(1) Guadalupe River at Comfort, Texas, generally described as United States Geological Survey (USGS) gage 08167000, and more particularly described as Latitude 29 degrees, 57 minutes, 86 seconds; Longitude 98 degrees, 53 minutes, 49.80 seconds.
Figure: 30 TAC §298.380(c)(1)

(2) Guadalupe River near Spring Branch, Texas, generally described as USGS gage 08167500, and more particularly described as Latitude 29 degrees, 51 minutes, 37 seconds; Longitude 98 degrees, 23 minutes, 00 seconds.
Figure: 30 TAC §298.380(c)(2)

(3) Blanco River at Wimberley, Texas, generally described as USGS gage 08171000, and more particularly described as Latitude 29 degrees, 59 minutes, 39 seconds; Longitude 98 degrees, 05 minutes, 19 seconds.
Figure: 30 TAC §298.380(c)(3)

(4) San Marcos River at Luling, Texas, generally described as USGS gage 08172000, and more particularly described as Latitude 29 degrees, 39 minutes, 58 seconds; Longitude 97 degrees, 39 minutes, 02 seconds.
Figure: 30 TAC §298.380(c)(4)

(5) Plum Creek near Luling, Texas generally described as USGS gage 08173000, and more particularly described as Latitude 29 degrees, 41 minutes, 58 seconds; Longitude 97 degrees, 36 minutes, 12 seconds.
Figure: 30 TAC §298.380(c)(5)

(6) Guadalupe River at Gonzales, Texas, generally described as USGS gage 08173900, and more particularly described as Latitude 29 degrees, 29 minutes, 03 seconds; Longitude 97 degrees, 27 minutes, 00 seconds.
Figure: 30 TAC §298.380(c)(6)

(7) Sandies Creek near Westhoff, Texas, generally described as USGS gage 08175000, and more particularly described as Latitude 29 degrees, 12 minutes, 54 seconds; Longitude 97 degrees, 26 minutes, 57 seconds.
Figure: 30 TAC §298.380(c)(7)

(8) Guadalupe River at Cuero, Texas, generally described as USGS gage 08175800, and more particularly described as Latitude 29 degrees, 05 minutes, 25 seconds; Longitude 97 degrees, 19 minutes, 46 seconds.
Figure: 30 TAC §298.380(c)(8)

(9) Guadalupe River at Victoria, Texas, generally described as USGS gage 08176500, and more particularly described as Latitude 28 degrees, 47 minutes, 34 seconds; Longitude 97 degrees, 00 minutes, 46 seconds.

Figure: 30 TAC §298.380(c)(9)

(10) Medina River at Bandera, Texas, generally described as USGS gage 08178880, and more particularly described as Latitude 29 degrees, 43 minutes, 25 seconds; Longitude 99 degrees, 04 minutes, 11 seconds.
Figure: 30 TAC §298.380(c)(10)

(11) Medina River at San Antonio, Texas, generally described as USGS gage 08181500, and more particularly described as Latitude 29 degrees, 15 minutes, 50 seconds; Longitude 98 degrees, 29 minutes, 26 seconds.
Figure: 30 TAC §298.380(c)(11)

(12) San Antonio River near Elmendorf, Texas, generally described as USGS gage 08181800, and more particularly described as Latitude 29 degrees, 13 minutes, 19 seconds; Longitude 98 degrees, 21 minutes, 20 seconds.

(A) United States Geological Survey Gage 08181800, San Antonio River near Elmendorf: Subsistence Flows, Base Flows, and Small Seasonal Pulses.
Figure: 30 TAC §298.380(c)(12)(A)

(B) United States Geological Survey Gage 08181800, San Antonio River near Elmendorf: Large Pulses.
Figure: 30 TAC §298.380(c)(12)(B)

(13) San Antonio River near Falls City, Texas, generally described as USGS gage 08183500, and more particularly described as Latitude 28 degrees, 57 minutes, 05 seconds; Longitude 98 degrees, 03 minutes, 50 seconds.

(A) United States Geological Survey Gage 08183500, San Antonio River near Falls City: Subsistence Flows, Base Flows, and Small Seasonal Pulses.
Figure: 30 TAC §298.380(c)(13)(A)

(B) United States Geological Survey Gage 08183500, San Antonio River near Falls City: Large Pulses.
Figure: 30 TAC §298.380(c)(13)(B)

(14) Cibolo Creek near Falls City, Texas, generally described as USGS gage 08186000, and more particularly described as Latitude 29 degrees, 00 minutes, 50 seconds; Longitude 97 degrees, 55 minutes, 48 seconds.

(A) United States Geological Survey Gage 08186000, Cibolo Creek near Falls City Subsistence Flows, Base Flows, and Small Seasonal Pulses.
Figure: 30 TAC §298.380(c)(14)(A)

(B) United States Geological Survey Gage 08186000, Cibolo Creek near Falls City: Large Pulses.
Figure: 30 TAC §298.380(c)(14)(B)

(15) San Antonio River at Goliad, Texas, generally described as USGS gage 08188500, and more particularly described as Latitude 28 degrees, 38 minutes, 57.43 seconds; Longitude 97 degrees, 23 minutes, 05.49 seconds.

(A) United States Geological Survey Gage 08188500, San Antonio River at Goliad: Subsistence Flows, Base Flows, and Small Seasonal Pulses.
Figure: 30 TAC §298.380(c)(15)(A)

(B) United States Geological Survey Gage 08188500, San Antonio River at Goliad: Large Pulses.
Figure: 30 TAC §298.380(c)(15)(B)

(16) Mission River at Refugio, Texas, generally described as USGS gage 08189500, and more particularly described as Latitude 28 degrees, 17 minutes, 30 seconds; Longitude 97 degrees, 16 minutes, 44 seconds.
Figure: 30 TAC §298.380(c)(16)

§298.385. Water Right Permit Conditions.

(a) For water right permits with an authorization to store or divert water in the Guadalupe and San Antonio River Basins and the San Antonio-Nueces Coastal Basin, to which the environmental flow standards apply, that are issued after the effective date of this subchapter, the water right permit or amendment shall contain flow restriction special conditions that are adequate to protect the environmental flow standards of this subchapter.

(b) For water right permits with an authorization to divert water in the Guadalupe and San Antonio River Basins and the San Antonio-Nueces Coastal Basin at a rate less than 20% of the pulse trigger level requirements of an applicable high flow pulse at a measurement point, as described in §298.380(c) of this title (relating to Environmental Flow Standards), and to which the environmental flow standards apply, that are issued after the effective date of this subchapter, the water right permit or amendment shall contain flow restriction special conditions that are adequate to protect the environmental flow standards of this subchapter; however, no special conditions are necessary to preserve or pass that applicable high flow pulse.

§298.390. Schedule for Revision of Standards.

The environmental flow standards or environmental flow set-asides adopted in this subchapter for the Guadalupe, San Antonio, Mission, and Aransas Rivers, their associated tributaries, Mission, Copano, Aransas, and San Antonio Bays, and the associated estuaries may be revised by the commission through the rulemaking process. The final revised rules shall be effective no sooner than ten years from the effective date of this rule, unless the Guadalupe, San Antonio, Mission, and Aransas Basin and Bay Area Stakeholder Committee submits a work plan approved by the advisory group under Texas Water Code, §11.02362(p), that provides for a periodic review to occur more frequently. The rulemaking process shall include participation by a balanced representation of stakeholders having interests in the Guadalupe, San Antonio, Mission, and Aransas Rivers, their associated tributaries, Mission, Copano, Aransas, and San Antonio Bays.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's legal authority to adopt.

Filed with the Office of the Secretary of State on March 30, 2012.

TRD-201201670
Robert Martinez
Director, Environmental Law Division
Texas Commission on Environmental Quality
Earliest possible date of adoption: May 13, 2012
For further information, please call: (512) 239-0779

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TITLE 40. SOCIAL SERVICES AND ASSISTANCE

PART 1. DEPARTMENT OF AGING AND DISABILITY SERVICES

CHAPTER 3. ADMINISTRATIVE RESPONSIBILITIES OF STATE FACILITIES

Figure: 30 TAC §298.320(b)

Cumulative Streamflow for Calculating Hydrologic Conditions for Measurement Points on the Colorado River above Lake Travis and tributaries of the Colorado River, and in the Colorado-Lavaca and the Lavaca-Guadalupe Coastal Basins

		Cumulative Streamflow (acre-feet)			
BASIN	MEASUREMENT POINT	SEVERE	DRY	AVERAGE	WET
COLORADO	Colorado River above Silver	less than 4,090	4,090 - 16,600	16,600 - 57,490	greater than 57,490
COLORADO	Colorado River near Ballinger	less than 3,120	3,120 - 11,150	11,150 - 67,700	greater than 67,700
COLORADO	Elm Creek at Ballinger	less than 820	820 - 4,990	4,990 - 46,560	greater than 46,560
COLORADO	South Concho River at Christoval	less than 5,270	5,270 - 7,380	7,380 - 21,660	greater than 21,660
COLORADO	Concho River at Paint Rock	less than 7,110	7,110 - 17,000	17,000 - 49,900	greater than 49,900
COLORADO	Pecan Bayou near Mullin	less than 11,860	11,860 - 26,700	26,700 - 187,740	greater than 187,740
COLORADO	San Saba River at San Saba	less than 40,550	40,550 - 61,100	61,100 - 149,890	greater than 149,890
COLORADO	Colorado River near San Saba	less than 80,510	80,510 - 205,110	205,110 - 568,970	greater than 568,970
COLORADO	Llano River at Llano	less than 90,810	90,810 - 145,660	145,660 - 364,540	greater than 364,540
COLORADO	Pedernales River near Johnson City	less than 27,710	27,710 - 70,210	70,210 - 222,700	greater than 222,700
COLORADO	Onion Creek near Driftwood	less than 810	810 - 10,460	10,460 - 59,610	greater than 59,610
COLORADO-LAVACA	Tres Palacios Creek near Midfield	less than 31,940	31,940 - 62,920	62,920 - 158,630	greater than 158,630
LAVACA-GUADALUPE	Garcitas Creek near Inez	less than 1,880	1,880 - 10,790	10,790 - 62,460	greater than 62,460

Figure: 30 TAC §298.320(c)

Combined Reservoir Storage for Calculating Hydrologic Conditions
for Measurement Points on the Colorado River below Lake Travis

		Combined Reservoir Storage in Lakes Travis and Buchanan (acre-feet)		
BASIN	MEASUREMENT POINTS	SEVERE	DRY	AVERAGE
COLORADO	Colorado River at Bastrop, Colorado River at Columbus, Colorado River at Wharton	less than 1,103,700	1,103,700 - 1,737,460	greater than 1,737,460

Figure: 30 TAC §298.320(d)

Reservoir Elevation for Calculating Hydrologic Conditions
for Measurement Points in the Lavaca River Basin

		Reservoir Elevation of Lake Texana (msl)			
BASIN	MEASUREMENT POINTS	SEVERE	DRY	AVERAGE	WET
LAVACA	West Mustang Creek near Ganado, East Mustang Creek near Louise, Navidad River near Edna, Sandy Creek near Ganado, Lavaca River near Edna	less than 39.95	39.95 - 43.00	43.00 - 44.00	greater than 44.00

msl = mean sea level

Figure: 30 TAC §298.330(a)(2)

Bay and Estuary Freshwater Inflow Standards for Matagorda Bay Inflows from the Colorado River Basin

Inflow Regime	Monthly Minimum Quantity (af)	Spring Season Quantity (af)	Fall Season Quantity (af)	Intervening Season Quantity (af)	Long-Term Annual Strategy Quantity (af)	Annual Strategy Frequency
Monthly Strategy Threshold Inflow	15,000	N/A	N/A	N/A	N/A	100%
Level 1	N/A	114,000	81,000	105,000	N/A	90%
Level 2	N/A	168,700	119,900	155,400	N/A	75%
Level 3	N/A	246,200	175,000	226,800	N/A	60%
Level 4	N/A	433,200	307,800	399,000	N/A	35%
Annual Average	N/A	N/A	N/A	N/A	1,400,000	N/A

af = acre-feet
N/A = not applicable

Figure: 30 TAC §298.330(c)

Bay and Estuary Freshwater Inflow Standards for the Lavaca Bay System

Inflow Regime	Spring Inflow Quantity (af)	Fall Inflow Quantity (af)	Intervening Inflow Quantity (af)	Annual Strategy Frequency
Subsistence	13,500	9,600	6,900	96%
Base Dry	55,080	39,168	28,152	82%
Base Average	127,980	91,080	65,412	46%
Base Wet	223,650	158,976	114,264	28%

af = acre feet

Figure: 30 TAC §298.330(e)(1)

United States Geological Survey Gage 08123850, Colorado River above Silver

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**	**Annual Pulse**
Winter	Severe	1 cfs	2 cfs	Trigger: 18 cfs Volume: 120 af Duration: 13 days	Trigger: 42 cfs Volume: 300 af Duration: 15 days	Trigger: 3,000 cfs Volume: 13,600 af Duration: 17 days
Winter	Dry	N/A	2 cfs			
Winter	Average	N/A	4 cfs			
Winter	Wet	N/A	7 cfs			
Spring	Severe	1 cfs	2 cfs	Trigger: 600 cfs Volume: 2,500 af Duration: 9 days	Trigger: 1,800 cfs Volume: 7,900 af Duration: 11 days	
Spring	Dry	N/A	2 cfs			
Spring	Average	N/A	5 cfs			
Spring	Wet	N/A	12 cfs			
Summer	Severe	1 cfs	1 cfs	Trigger: 100 cfs Volume: 350 af Duration: 6 days	Trigger: 330 cfs Volume: 1,400 af Duration: 9 days	
Summer	Dry	N/A	1 cfs			
Summer	Average	N/A	3 cfs			
Summer	Wet	N/A	8 cfs			
Fall	Severe	1 cfs	1 cfs	Trigger: 100 cfs Volume: 400 af Duration: 6 days	Trigger: 430 cfs Volume: 1,800 af Duration: 9 days	
Fall	Dry	N/A	1 cfs			
Fall	Average	N/A	4 cfs			
Fall	Wet	N/A	10 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

Figure: 30 TAC §298.330(e)(2)

United States Geological Survey Gage 08126380, Colorado River near Ballinger

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**	**Annual Pulse**
Winter	Severe	1 cfs	4 cfs	Trigger: 27 cfs Volume: 180 af Duration: 11 days	Trigger: 96 cfs Volume: 660 af Duration: 17 days	Trigger: 3,200 cfs Volume: 13,700 af Duration: 10 days
Winter	Dry	N/A	4 cfs			
Winter	Average	N/A	9 cfs			
Winter	Wet	N/A	14 cfs			
Spring	Severe	1 cfs	3 cfs	Trigger: 1,300 cfs Volume: 5,300 af Duration: 9 days	Trigger: 3,200 cfs Volume: 13,700 af Duration: 10 days	
Spring	Dry	N/A	3 cfs			
Spring	Average	N/A	9 cfs			
Spring	Wet	N/A	19 cfs			
Summer	Severe	1 cfs	2 cfs	Trigger: 130 cfs Volume: 490 af Duration: 6 days	Trigger: 630 cfs Volume: 2,600 af Duration: 9 days	
Summer	Dry	N/A	2 cfs			
Summer	Average	N/A	6 cfs			
Summer	Wet	N/A	14 cfs			
Fall	Severe	1 cfs	4 cfs	Trigger: 250 cfs Volume: 950 af Duration: 8 days	Trigger: 1,500 cfs Volume: 5,700 af Duration: 10 days	
Fall	Dry	N/A	4 cfs			
Fall	Average	N/A	9 cfs			
Fall	Wet	N/A	17 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

Figure: 30 TAC §298.330(e)(3)

United States Geological Survey Gage 08147000, Colorado River near San Saba

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**	**Annual Pulse**
Winter	Severe	50 cfs	95 cfs	Trigger: 520 cfs Volume: 3,100 af Duration: 9 days	Trigger: 1,600 cfs Volume: 11,100 af Duration: 15 days	Trigger: 18,900 cfs Volume: 129,100 af Duration: 23 days
Winter	Dry	N/A	95 cfs			
Winter	Average	N/A	150 cfs			
Winter	Wet	N/A	210 cfs			
Spring	Severe	50 cfs	120 cfs	Trigger: 5,800 cfs Volume: 31,300 af Duration: 9 days	Trigger: 11,000 cfs Volume: 70,200 af Duration: 13 days	
Spring	Dry	N/A	120 cfs			
Spring	Average	N/A	190 cfs			
Spring	Wet	N/A	360 cfs			
Summer	Severe	30 cfs	72 cfs	Trigger: 510 cfs Volume: 1,900 af Duration: 4 days	Trigger: 1,400 cfs Volume: 6,500 af Duration: 7 days	
Summer	Dry	N/A	72 cfs			
Summer	Average	N/A	120 cfs			
Summer	Wet	N/A	210 cfs			
Fall	Severe	30 cfs	95 cfs	Trigger: 890 cfs Volume: 3,500 af Duration: 6 days	Trigger: 3,800 cfs Volume: 19,200 af Duration: 12 days	
Fall	Dry	N/A	95 cfs			
Fall	Average	N/A	150 cfs			
Fall	Wet	N/A	210 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

Figure: 30 TAC §298.330(e)(4)

United States Geological Survey Gage 08127000, Elm Creek at Ballinger

Season	Hydrologic Condition	Subsistence	Base	Small Seasonal Pulse (2 per season)	Large Seasonal Pulse (1 per season)	Annual Pulse
Winter	Severe	1 cfs	1 cfs	Trigger: 10 cfs Volume: 71 af Duration: 10 days	Trigger: 40 cfs Volume: 270 af Duration: 1 day	Trigger: 1,900 cfs Volume: 7,200 af Duration: 18 days
Winter	Dry	N/A	1 cfs			
Winter	Average	N/A	1 cfs			
Winter	Wet	N/A	4 cfs			
Spring	Severe	1 cfs	1 cfs	Trigger: 380 cfs Volume: 1,400 af Duration: 10 days	Trigger: 1,000 cfs Volume: 3,800 af Duration: 12 days	
Spring	Dry	N/A	1 cfs			
Spring	Average	N/A	1 cfs			
Spring	Wet	N/A	5 cfs			
Summer	Severe	1 cfs	1 cfs	Trigger: 6 cfs Volume: 25 af Duration: 6 days	Trigger: 74 cfs Volume: 300 af Duration: 9 days	
Summer	Dry	N/A	1 cfs			
Summer	Average	N/A	1 cfs			
Summer	Wet	N/A	1 cfs			
Fall	Severe	1 cfs	1 cfs	Trigger: 10 cfs Volume: 46 af Duration: 9 days	Trigger: 190 cfs Volume: 850 af Duration: 15 days	
Fall	Dry	N/A	1 cfs			
Fall	Average	N/A	1 cfs			
Fall	Wet	N/A	1 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

Figure: 30 TAC §298.330(e)(5)

United States Geological Survey Gage 08136500, Concho River at Paint Rock

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**	**Annual Pulse**
Winter	Severe	1 cfs	8 cfs	Trigger: 61 cfs Volume: 400 af Duration: 10 days	Trigger: 160 cfs Volume: 1,200 af Duration: 16 days	Trigger: 3,000 cfs Volume: 13,500 af Duration: 19 days
Winter	Dry	N/A	8 cfs			
Winter	Average	N/A	20 cfs			
Winter	Wet	N/A	36 cfs			
Spring	Severe	1 cfs	4 cfs	Trigger: 500 cfs Volume: 2,000 af Duration: 8 days	Trigger: 1,400 cfs Volume: 5,700 af Duration: 11 days	
Spring	Dry	N/A	4 cfs			
Spring	Average	N/A	14 cfs			
Spring	Wet	N/A	27 cfs			
Summer	Severe	1 cfs	1 cfs	Trigger: 32 cfs Volume: 140 af Duration: 6 days	Trigger: 110 cfs Volume: 520 af Duration: 8 days	
Summer	Dry	N/A	1 cfs			
Summer	Average	N/A	4 cfs			
Summer	Wet	N/A	12 cfs			
Fall	Severe	1 cfs	5 cfs	Trigger: 74 cfs Volume: 330 af Duration: 7 days	Trigger: 300 cfs Volume: 1,300 af Duration: 10 days	
Fall	Dry	N/A	5 cfs			
Fall	Average	N/A	16 cfs			
Fall	Wet	N/A	29 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

Figure: 30 TAC §298.330(e)(6)

United States Geological Survey Gage 08128000, South Concho River at Christoval

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**	**Annual Pulse**
Winter	Severe	2 cfs	9 cfs	N/A	N/A	Trigger: 420 cfs Volume: 1,400 af Duration: 9 days
Winter	Dry	N/A	9 cfs			
Winter	Average	N/A	15 cfs			
Winter	Wet	N/A	22 cfs			
Spring	Severe	3 cfs	9 cfs	N/A	N/A	
Spring	Dry	N/A	9 cfs			
Spring	Average	N/A	15 cfs			
Spring	Wet	N/A	22 cfs			
Summer	Severe	2 cfs	7 cfs	N/A	N/A	
Summer	Dry	N/A	7 cfs			
Summer	Average	N/A	12 cfs			
Summer	Wet	N/A	22 cfs			
Fall	Severe	2 cfs	7 cfs	N/A	Trigger: 45 cfs Volume: 190 af Duration: 7 days	
Fall	Dry	N/A	7 cfs			
Fall	Average	N/A	12 cfs			
Fall	Wet	N/A	22 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

Figure: 30 TAC §298.330(e)(7)

United States Geological Survey Gage 08143600, Pecan Bayou near Mullin

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**	**Annual Pulse**
Winter	Severe	1 cfs	3 cfs	Trigger: 52 cfs Volume: 230 af Duration: 7 days	Trigger: 250 cfs Volume: 1,500 af Duration: 14 days	Trigger: 3,500 cfs Volume: 25,800 af Duration: 26 days
Winter	Dry	N/A	3 cfs			
Winter	Average	N/A	7 cfs			
Winter	Wet	N/A	12 cfs			
Spring	Severe	1 cfs	3 cfs	Trigger: 710 cfs Volume: 3,600 af Duration: 10 days	Trigger: 2,100 cfs Volume: 13,200 af Duration: 17 days	
Spring	Dry	N/A	3 cfs			
Spring	Average	N/A	9 cfs			
Spring	Wet	N/A	19 cfs			
Summer	Severe	1 cfs	2 cfs	Trigger: 21 cfs Volume: 73 af Duration: 4 days	Trigger: 100 cfs Volume: 440 af Duration: 7 days	
Summer	Dry	N/A	2 cfs			
Summer	Average	N/A	4 cfs			
Summer	Wet	N/A	8 cfs			
Fall	Severe	1 cfs	3 cfs	Trigger: 36 cfs Volume: 110 af Duration: 3 days	Trigger: 250 cfs Volume: 1,200 af Duration: 9 days	
Fall	Dry	N/A	3 cfs			
Fall	Average	N/A	7 cfs			
Fall	Wet	N/A	12 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

Figure: 30 TAC §298.330(e)(8)

United States Geological Survey Gage 08146000, San Saba River at San Saba

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**	**Annual Pulse**
Winter	Severe	29 cfs	56 cfs	Trigger: 150 cfs Volume: 980 af Duration: 14 days	Trigger: 330 cfs Volume: 2,300 af Duration: 18 days	Trigger: 5,500 cfs Volume: 27,400 af Duration: 21 days
Winter	Dry	N/A	56 cfs			
Winter	Average	N/A	81 cfs			
Winter	Wet	N/A	110 cfs			
Spring	Severe	22 cfs	56 cfs	Trigger: 810 cfs Volume: 3,600 af Duration: 9 days	Trigger: 2,000 cfs Volume: 9,200 af Duration: 12 days	
Spring	Dry	N/A	56 cfs			
Spring	Average	N/A	81 cfs			
Spring	Wet	N/A	110 cfs			
Summer	Severe	3 cfs	32 cfs	N/A	Trigger: 210 cfs Volume: 1,100 af Duration: 9 days	
Summer	Dry	N/A	32 cfs			
Summer	Average	N/A	46 cfs			
Summer	Wet	N/A	62 cfs			
Fall	Severe	13 cfs	40 cfs	Trigger: 150 cfs Volume: 600 af Duration: 8 days	Trigger: 500 cfs Volume: 2,300 af Duration: 12 days	
Fall	Dry	N/A	40 cfs			
Fall	Average	N/A	64 cfs			
Fall	Wet	N/A	87 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

Figure: 30 TAC §298.330(e)(9)

United States Geological Survey Gage 08151500, Llano River at Llano

Season	Hydrologic Condition	Subsistence	Base	Small Seasonal Pulse (2 per season)	Large Seasonal Pulse (1 per season)	Annual Pulse
Winter	Severe	44 cfs	100 cfs	Trigger: 390 cfs Volume: 2,500 af Duration: 13 days	Trigger: 1,100 cfs Volume: 6,800 af Duration: 16 days	Trigger: 9,100 cfs Volume: 46,100 af Duration: 18 days
Winter	Dry	N/A	100 cfs			
Winter	Average	N/A	150 cfs			
Winter	Wet	N/A	190 cfs			
Spring	Severe	35 cfs	100 cfs	Trigger: 1,800 cfs Volume: 8,500 af Duration: 10 days	Trigger: 4,800 cfs Volume: 23,200 af Duration: 13 days	
Spring	Dry	N/A	100 cfs			
Spring	Average	N/A	150 cfs			
Spring	Wet	N/A	190 cfs			
Summer	Severe	3 cfs	67 cfs	N/A	Trigger: 560 cfs Volume: 2,600 af Duration: 9 days	
Summer	Dry	N/A	67 cfs			
Summer	Average	N/A	92 cfs			
Summer	Wet	N/A	130 cfs			
Fall	Severe	20 cfs	87 cfs	Trigger: 370 cfs Volume: 1,600 af Duration: 8 days	Trigger: 1,400 cfs Volume: 6,300 af Duration: 11 days	
Fall	Dry	N/A	87 cfs			
Fall	Average	N/A	120 cfs			
Fall	Wet	N/A	190 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

Figure: 30 TAC §298.330(e)(10)

United States Geological Survey Gage 08153500, Pedernales River near Johnson City

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**	**Annual Pulse**
Winter	Severe	7 cfs	23 cfs	Trigger: 270 cfs Volume: 1,300 af Duration: 9 days	Trigger: 860 cfs Volume: 4,700 af Duration: 15 days	Trigger: 6,980 cfs Volume: 28,320 af Duration: 15 days
Winter	Dry	N/A	23 cfs			
Winter	Average	N/A	45 cfs			
Winter	Wet	N/A	80 cfs			
Spring	Severe	4 cfs	29 cfs	Trigger: 1,700 cfs Volume: 6,300 af Duration: 8 days	Trigger: 3,700 cfs Volume: 14,400 af Duration: 10 days	
Spring	Dry	N/A	29 cfs			
Spring	Average	N/A	60 cfs			
Spring	Wet	N/A	110 cfs			
Summer	Severe	1 cfs	16 cfs	N/A	Trigger: 90 cfs Volume: 1,100 af Duration: 7 days	
Summer	Dry	N/A	16 cfs			
Summer	Average	N/A	29 cfs			
Summer	Wet	N/A	49 cfs			
Fall	Severe	1 cfs	16 cfs	Trigger: 160 cfs Volume: 620 af Duration: 6 days	Trigger: 860 cfs Volume: 3,000 af Duration: 8 days	
Fall	Dry	N/A	16 cfs			
Fall	Average	N/A	29 cfs			
Fall	Wet	N/A	49 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

Figure: 30 TAC §298.330(e)(11)

United States Geological Survey Gage 08158700, Onion Creek near Driftwood

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**	**Annual Pulse**
Winter	Severe	1 cfs	2 cfs	N/A	Trigger: 170 cfs Volume: 1,900 af Duration: 20 days	Trigger: 1,200 cfs Volume: 8,700 af Duration: 34 days
Winter	Dry	N/A	2 cfs			
Winter	Average	N/A	6 cfs			
Winter	Wet	N/A	26 cfs			
Spring	Severe	1 cfs	4 cfs	Trigger: 200 cfs Volume: 1,100 af Duration: 11 days	Trigger: 620 cfs Volume: 3,700 af Duration: 19 days	
Spring	Dry	N/A	4 cfs			
Spring	Average	N/A	12 cfs			
Spring	Wet	N/A	34 cfs			
Summer	Severe	1 cfs	1 cfs	N/A	N/A	
Summer	Dry	N/A	1 cfs			
Summer	Average	N/A	3 cfs			
Summer	Wet	N/A	7 cfs			
Fall	Severe	1 cfs	1 cfs	Trigger: 18 cfs Volume: 70 af Duration: 5 days	Trigger: 120 cfs Volume: 560 af Duration: 11 days	
Fall	Dry	N/A	1 cfs			
Fall	Average	N/A	3 cfs			
Fall	Wet	N/A	7 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

Figure: 30 TAC §298.330(e)(12)(A)

United States Geological Survey Gage 08159200, Colorado River at Bastrop

Season	Month	Hydrologic Condition	Subsistence	Base	Seasonal Pulse (2 per season)
Winter	December	Severe	186 cfs	311 cfs	Magnitude: 3,000 cfs Duration: 4 days
	December	Dry	N/A	311 cfs	
	December	Average	N/A	450 cfs	
	January	Severe	208 cfs	313 cfs	
	January	Dry	N/A	313 cfs	
	January	Average	N/A	433 cfs	
	February	Severe	274	317 cfs	
	February	Dry	N/A	317 cfs	
	February	Average	N/A	497 cfs	
Spring	March	Severe	274 cfs	274 cfs	Magnitude: 3,000 cfs Duration: 4 days
	March	Dry	N/A	274 cfs	
	March	Average	N/A	497 cfs	
	April	Severe	184 cfs	287 cfs	
	April	Dry	N/A	287 cfs	
	April	Average	N/A	635 cfs	
	May	Severe	275 cfs	579 cfs	
	May	Dry	N/A	579 cfs	
	May	Average	N/A	824 cfs	
	June	Severe	202 cfs	418 cfs	
	June	Dry	N/A	418 cfs	
	June	Average	N/A	733 cfs	
Summer	July	Severe	137 cfs	347 cfs	Magnitude: 3,000 cfs Duration: 4 days
	July	Dry	N/A	347 cfs	
	July	Average	N/A	610 cfs	
	August	Severe	123 cfs	194 cfs	
	August	Dry	N/A	194 cfs	
	August	Average	N/A	381 cfs	

Fall	September	Severe	123 cfs	236 cfs	Magnitude: 3,000 cfs Duration: 4 days
	September	Dry	N/A	236 cfs	
	September	Average	N/A	423 cfs	
	October	Severe	127 cfs	245 cfs	
	October	Dry	N/A	245 cfs	
	October	Average	N/A	433 cfs	
	November	Severe	180 cfs	283 cfs	
	November	Dry	N/A	283 cfs	
	November	Average	N/A	424 cfs	

cfs = cubic feet per second
N/A = not applicable

Figure: 30 TAC §298.330(e)(12)(B)

United States Geological Survey Gage 08159200, Colorado River at Bastrop

Pulse Frequency	**Pulse Magnitude**	**Pulse Duration**
1 per 18 months	8,000 cfs	2 days

cfs = cubic feet per second

Figure: 30 TAC §298.330(e)(13)(A)

United States Geological Survey Gage 08161000, Colorado River at Columbus

Season	Month	Hydrologic Condition	Subsistence	Base	Seasonal Pulse (2 per season)
Winter	December	Severe	301 cfs	464 cfs	Magnitude: 3,000 cfs Duration: 4 days
	December	Dry	N/A	464 cfs	
	December	Average	N/A	737 cfs	
	January	Severe	340 cfs	487 cfs	
	January	Dry	N/A	487 cfs	
	January	Average	N/A	828 cfs	
	February	Severe	375	590 cfs	
	February	Dry	N/A	590 cfs	
	February	Average	N/A	895 cfs	
Spring	March	Severe	375 cfs	525 cfs	Magnitude: 3,000 cfs Duration: 4 days
	March	Dry	N/A	525 cfs	
	March	Average	N/A	1,020 cfs	
	April	Severe	299 cfs	554 cfs	
	April	Dry	N/A	554 cfs	
	April	Average	N/A	977 cfs	
	May	Severe	425 cfs	966 cfs	
	May	Dry	N/A	966 cfs	
	May	Average	N/A	1,316 cfs	
	June	Severe	534 cfs	967 cfs	
	June	Dry	N/A	967 cfs	
	June	Average	N/A	1,440 cfs	
Summer	July	Severe	342 cfs	570 cfs	Magnitude: 3,000 cfs Duration: 4 days
	July	Dry	N/A	570 cfs	
	July	Average	N/A	895 cfs	
	August	Severe	190 cfs	310 cfs	
	August	Dry	N/A	310 cfs	
	August	Average	N/A	516 cfs	

Fall	September	Severe	279 cfs	405 cfs	Magnitude: 3,000 cfs Duration: 4 days
	September	Dry	N/A	405 cfs	
	September	Average	N/A	610 cfs	
	October	Severe	190 cfs	356 cfs	
	October	Dry	N/A	356 cfs	
	October	Average	N/A	741 cfs	
	November	Severe	202 cfs	480 cfs	
	November	Dry	N/A	480 cfs	
	November	Average	N/A	755 cfs	

cfs = cubic feet per second
N/A = not applicable

Figure: 30 TAC §298.330(e)(13)(B)

United States Geological Survey Gage 08161000, Colorado River at Columbus

Pulse Frequency	**Pulse Magnitude**	**Pulse Duration**
1 per 18 months	8,000 cfs	2 days
1 per 2 years	27,000 cfs	2 days

cfs = cubic feet per second

Figure: 30 TAC §298.330(e)(14)(A)

United States Geological Survey Gage 08162000, Colorado River at Wharton

Season	Month	Hydrologic Condition	Subsistence	Base	Seasonal Pulse (2 per season)
Winter	December	Severe	202 cfs	470 cfs	Magnitude: 3,000 cfs Duration: 4 days
	December	Dry	N/A	470 cfs	
	December	Average	N/A	746 cfs	
	January	Severe	315 cfs	492 cfs	
	January	Dry	N/A	492 cfs	
	January	Average	N/A	838 cfs	
	February	Severe	303	597 cfs	
	February	Dry	N/A	597 cfs	
	February	Average	N/A	906 cfs	
Spring	March	Severe	204 cfs	531 cfs	Magnitude: 3,000 cfs Duration: 4 days
	March	Dry	N/A	531 cfs	
	March	Average	N/A	1,036 cfs	
	April	Severe	270 cfs	561 cfs	
	April	Dry	N/A	561 cfs	
	April	Average	N/A	1,011 cfs	
	May	Severe	304 cfs	985 cfs	
	May	Dry	N/A	985 cfs	
	May	Average	N/A	1,397 cfs	
	June	Severe	371 cfs	984 cfs	
	June	Dry	N/A	984 cfs	
	June	Average	N/A	1,512 cfs	
Summer	July	Severe	212 cfs	577 cfs	Magnitude: 3,000 cfs Duration: 4 days
	July	Dry	N/A	577 cfs	
	July	Average	N/A	906 cfs	
	August	Severe	107 cfs	314 cfs	
	August	Dry	N/A	314 cfs	
	August	Average	N/A	522 cfs	

Fall	September	Severe	188 cfs	410 cfs	Magnitude: 3,000 cfs Duration: 4 days
	September	Dry	N/A	410 cfs	
	September	Average	N/A	617 cfs	
	October	Severe	147 cfs	360 cfs	
	October	Dry	N/A	360 cfs	
	October	Average	N/A	749 cfs	
	November	Severe	173 cfs	486 cfs	
	November	Dry	N/A	486 cfs	
	November	Average	N/A	764 cfs	

cfs = cubic feet per second
N/A = not applicable

Figure: 30 TAC §298.330(e)(14)(B)

United States Geological Survey Gage 08162000, Colorado River at Wharton

Pulse Frequency	**Pulse Magnitude**	**Pulse Duration**
1 per 18 months	8,000 cfs	2 days
1 per 2 years	27,000 cfs	2 days

cfs = cubic feet per second

Figure: 30 TAC §298.330(e)(15)

United States Geological Survey Gage 08164000, Lavaca River near Edna

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**	**Annual Pulse**
Winter	Severe	8.5 cfs	30 cfs	Trigger: 2,000 cfs Volume: 8,000 af Duration: 6 days	Trigger: 4,500 cfs Volume: 18,400 af Duration: 7 days	Trigger: 4,500 cfs Volume: 18,400 af Duration: 7 days
Winter	Dry	N/A	30 cfs			
Winter	Average	N/A	55 cfs			
Winter	Wet	N/A	94 cfs			
Spring	Severe	10 cfs	30 cfs	Trigger: 4,500 cfs Volume: 18,400 af Duration: 7 days	Trigger: 4,500 cfs Volume: 18,400 af Duration: 7 days	
Spring	Dry	N/A	30 cfs			
Spring	Average	N/A	55 cfs			
Spring	Wet	N/A	94 cfs			
Summer	Severe	1.3 cfs	20 cfs	Trigger: 88 cfs Volume: 370 af Duration: 4 days	Trigger: 420 cfs Volume: 1,800 af Duration: 6 days	
Summer	Dry	N/A	20 cfs			
Summer	Average	N/A	48 cfs			
Summer	Wet	N/A	33 cfs			
Fall	Severe	1.2 cfs	20 cfs	Trigger: 1,600 cfs Volume: 6,100 af Duration: 5 days	Trigger: 4,500 cfs Volume: 18,000 af Duration: 6 days	
Fall	Dry	N/A	20 cfs			
Fall	Average	N/A	33 cfs			
Fall	Wet	N/A	58 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

Figure: 30 TAC §298.330(e)(16)

United States Geological Survey Gage 08164390, Navidad River at Strane Park near Edna

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**	**Annual Pulse**
Winter	Severe	1 cfs	14 cfs	Trigger: 2,000 cfs Volume: 9,000 af Duration: 6 days	Trigger: 2,500 cfs Volume: 11,250 af Duration: 7 days	Trigger: 2,500 cfs Volume: 11,250 af Duration: 7 days
Winter	Dry	N/A	14 cfs			
Winter	Average	N/A	35 cfs			
Winter	Wet	N/A	71 cfs			
Spring	Severe	2.8 cfs	18 cfs	Trigger: 2,500 cfs Volume: 11,250 af Duration: 7 days	Trigger: 2,500 cfs Volume: 11,250 af Duration: 7 days	
Spring	Dry	N/A	18 cfs			
Spring	Average	N/A	35 cfs			
Spring	Wet	N/A	71 cfs			
Summer	Severe	1.2 cfs	24 cfs	Trigger: 200 cfs Volume: 1,000 af Duration: 5 days	Trigger: 610 cfs Volume: 3,400 af Duration: 6 days	
Summer	Dry	N/A	24 cfs			
Summer	Average	N/A	47 cfs			
Summer	Wet	N/A	84 cfs			
Fall	Severe	2.2 cfs	17 cfs	Trigger: 2,000 cfs Volume: 8,700 af Duration: 6 days	Trigger: 2,500 cfs Volume: 11,250 af Duration: 7 days	
Fall	Dry	N/A	17 cfs			
Fall	Average	N/A	35 cfs			
Fall	Wet	N/A	71 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

Figure: 30 TAC §298.330(e)(17)

United States Geological Survey Gage 08164450, Sandy Creek near Ganado

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**	**Annual Pulse**
Winter	Severe	1 cfs	5 cfs	Trigger: 800 cfs Volume: 4,000 af Duration: 6 days	Trigger: 1,800 cfs Volume: 10,000 af Duration: 8 days	Trigger: 2,200 cfs Volume: 12,200 af Duration: 10 days
Winter	Dry	N/A	5 cfs			
Winter	Average	N/A	14 cfs			
Winter	Wet	N/A	30 cfs			
Spring	Severe	1 cfs	5 cfs	Trigger: 1,400 cfs Volume: 7,300 af Duration: 6 days	Trigger: 2,200 cfs Volume: 12,200 af Duration: 10 days	
Spring	Dry	N/A	5 cfs			
Spring	Average	N/A	14 cfs			
Spring	Wet	N/A	30 cfs			
Summer	Severe	1 cfs	9 cfs	Trigger: 91 cfs Volume: 500 af Duration: 4 days	Trigger: 260 cfs Volume: 1,600 af Duration: 7 days	
Summer	Dry	N/A	9 cfs			
Summer	Average	N/A	21 cfs			
Summer	Wet	N/A	39 cfs			
Fall	Severe	1 cfs	9 cfs	Trigger: 630 cfs Volume: 3,100 af Duration: 6 days	Trigger: 1,800 cfs Volume: 9,200 af Duration: 7 days	
Fall	Dry	N/A	9 cfs			
Fall	Average	N/A	21 cfs			
Fall	Wet	N/A	39 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

Figure: 30 TAC §298.330(e)(18)

United States Geological Survey Gage 08164504, East Mustang Creek near Louise

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**	**Annual Pulse**
Winter	Severe	1 cfs	1 cfs	Trigger: 150 cfs Volume: 680 af Duration: 5 days	Trigger: 340 cfs Volume: 1,700 af Duration: 8 days	Trigger: 1,000 cfs Volume: 6,000 af Duration: 10 days
Winter	Dry	N/A	1 cfs			
Winter	Average	N/A	2 cfs			
Winter	Wet	N/A	6 cfs			
Spring	Severe	1 cfs	1 cfs	Trigger: 280 cfs Volume: 1,400 af Duration: 7 days	Trigger: 550 cfs Volume: 3,000 af Duration: 9 days	
Spring	Dry	N/A	1 cfs			
Spring	Average	N/A	3 cfs			
Spring	Wet	N/A	6 cfs			
Summer	Severe	1 cfs	2 cfs	Trigger: 20 cfs Volume: 100 af Duration: 5 days	Trigger: 60 cfs Volume: 310 af Duration: 6 days	
Summer	Dry	N/A	2 cfs			
Summer	Average	N/A	5 cfs			
Summer	Wet	N/A	8 cfs			
Fall	Severe	1 cfs	1 cfs	Trigger: 150 cfs Volume: 650 af Duration: 6 days	Trigger: 430 cfs Volume: 2,100 af Duration: 7 days	
Fall	Dry	N/A	1 cfs			
Fall	Average	N/A	3 cfs			
Fall	Wet	N/A	8 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

Figure: 30 TAC §298.330(e)(19)

United States Geological Survey Gage 08164503, West Mustang Creek near Ganado

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**	**Annual Pulse**
Winter	Severe	1 cfs	4 cfs	Trigger: 470 cfs Volume: 2,400 af Duration: 6 days	Trigger: 1,000 cfs Volume: 5,600 af Duration: 8 days	Trigger: 1,000 cfs Volume: 5,600 af Duration: 8 days
Winter	Dry	N/A	4 cfs			
Winter	Average	N/A	9 cfs			
Winter	Wet	N/A	20 cfs			
Spring	Severe	1 cfs	5 cfs	Trigger: 810 cfs Volume: 4,400 af Duration: 6 days	Trigger: 1,000 cfs Volume: 5,600 af Duration: 8 days	
Spring	Dry	N/A	5 cfs			
Spring	Average	N/A	11 cfs			
Spring	Wet	N/A	20 cfs			
Summer	Severe	1 cfs	10 cfs	Trigger: 75 cfs Volume: 420 af Duration: 4 days	Trigger: 190 cfs Volume: 1,200 af Duration: 6 days	
Summer	Dry	N/A	10 cfs			
Summer	Average	N/A	18 cfs			
Summer	Wet	N/A	32 cfs			
Fall	Severe	1 cfs	6 cfs	Trigger: 470 cfs Volume: 2,200 af Duration: 6 days	Trigger: 1,000 cfs Volume: 5,600 af Duration: 8 days	
Fall	Dry	N/A	6 cfs			
Fall	Average	N/A	14 cfs			
Fall	Wet	N/A	26 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

Figure: 30 TAC §298.330(e)(20)

United States Geological Survey Gage 08164600, Garcitas Creek near Inez

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**	**Annual Pulse**
Winter	Severe	1 cfs	2 cfs	Trigger: 110 cfs Volume: 520 af Duration: 8 days	Trigger: 380 cfs Volume: 1,500 af Duration: 10 days	Trigger: 380 cfs Volume: 1,500 af Duration: 10 days
Winter	Dry	N/A	2 cfs			
Winter	Average	N/A	4 cfs			
Winter	Wet	N/A	7 cfs			
Spring	Severe	1 cfs	2 cfs	Trigger: 380 cfs Volume: 1,500 af Duration: 10 days	Trigger: 380 cfs Volume: 1,500 af Duration: 10 days	
Spring	Dry	N/A	2 cfs			
Spring	Average	N/A	4 cfs			
Spring	Wet	N/A	7 cfs			
Summer	Severe	1 cfs	1 cfs	Trigger: 8 cfs Volume: 28 af Duration: 4 days	Trigger: 36 cfs Volume: 150 af Duration: 8 days	
Summer	Dry	N/A	1 cfs			
Summer	Average	N/A	2 cfs			
Summer	Wet	N/A	3 cfs			
Fall	Severe	1 cfs	1 cfs	Trigger: 110 cfs Volume: 420 af Duration: 8 days	Trigger: 380 cfs Volume: 1,500 af Duration: 10 days	
Fall	Dry	N/A	1 cfs			
Fall	Average	N/A	2 cfs			
Fall	Wet	N/A	5 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

Figure: 30 TAC §298.330(e)(21)

United States Geological Survey Gage 08162600, Tres Palacios River near Midfield

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**	**Annual Pulse**
Winter	Severe	2 cfs	9 cfs	Trigger: 650 cfs Volume: 2,500 af Duration: 6 days	Trigger: 1,300 cfs Volume: 4,900 af Duration: 6 days	Trigger: 2,000 cfs Volume: 9,000 af Duration: 8 days
Winter	Dry	N/A	9 cfs			
Winter	Average	N/A	13 cfs			
Winter	Wet	N/A	18 cfs			
Spring	Severe	2.5 cfs	9 cfs	Trigger: 1,200 cfs Volume: 4,400 af Duration: 6 days	Trigger: 1,900 cfs Volume: 7,100 af Duration: 6 days	
Spring	Dry	N/A	9 cfs			
Spring	Average	N/A	13 cfs			
Spring	Wet	N/A	22 cfs			
Summer	Severe	1 cfs	7 cfs	Trigger: 75 cfs Volume: 360 af Duration: 5 days	Trigger: 280 cfs Volume: 1,300 af Duration: 6 days	
Summer	Dry	N/A	7 cfs			
Summer	Average	N/A	13 cfs			
Summer	Wet	N/A	22 cfs			
Fall	Severe	1 cfs	7 cfs	Trigger: 800 cfs Volume: 3,200 af Duration: 6 days	Trigger: 1,900 cfs Volume: 7,700 af Duration: 7 days	
Fall	Dry	N/A	7 cfs			
Fall	Average	N/A	13 cfs			
Fall	Wet	N/A	18 cfs			

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

Figure: 30 TAC §298.380(a)(1)

Bay and Estuary Freshwater Inflow Standards for the San Antonio Bay System for the Spring Season

Inflow Regime	**Inflow Quantity (February) (af)**	**Inflow Quantity (March-May) (af)**	**Strategy Target Frequency**
Spring 1	N/A	550,000-925,000	at least 12% of the years
Spring 2	N/A	375,000-550,000	at least 12% of the years
Spring 3	N/A	275,000-375,000	N/A
Spring 4	greater than 75,000	150,000-275,000	N/A
Spring 5	less than 75,000	150,000-275,000	N/A
Spring 6	N/A	0-150,000	no more than 9% of the years
Spring 2 and Spring 3 combined	N/A	N/A	at least 17% of the years
Spring 4 and Spring 5 combined	N/A	N/A	less than 67% of the total

Figure: 30 TAC §298.380(a)(2)

Bay and Estuary Freshwater Inflow Standards for the San Antonio Bay System for the Summer Season

Inflow Regime	**Inflow Quantity (June) (af)**	**Inflow Quantity (July-September) (af)**	**Strategy Target Frequency**
Summer 1	N/A	450,000-800,000	at least 12% of the years
Summer 2	N/A	275,000-450,000	at least 17% of the years
Summer 3	N/A	170,000-275,000	N/A
Summer 4	greater than 40,000	75,000-170,000	N/A
Summer 5	less than 40,000	75,000-170,000	N/A
Summer 6	N/A	50,000-75,000	N/A
Summer 7	N/A	0-50,000	no more than 6% of the years
Summer 2 and Summer 3 combined	N/A	N/A	at least 30% of the years
Summer 4 and Summer 5 combined	N/A	N/A	Summer 5 no more than 17% of the total
Summer 6 and Summer 7 combined	N/A	N/A	no more than 9% of the years

af=acre feet

Figure: 30 TAC §298.380(a)(3)

Bay and Estuary Freshwater Inflow Standards for Mission and Aransas Bays for the Summer Season

Inflow Regime	Inflow Quantity (February) (af)	Inflow Quantity (March-May) (af)	Strategy Target Frequency
Summer 1	N/A	500,000-1,000,000	at least 2% of the years

af = acre feet

Figure: 30 TAC §298.380(c)(1)

United States Geological Survey Gage 08167000, Guadalupe River at Comfort

Season	Subsistence	Base	Pulse
Winter	31 cfs	77 cfs	2 per season Trigger: 140 cfs Volume: 1,030 af Duration: 11 days
Spring	18 cfs	69 cfs	2 per season Trigger: 400 cfs Volume: 2,980 af Duration: 17 days
Summer	2 cfs	50 cfs	2 per season Trigger: 160 cfs Volume: 1,130 af Duration: 12 days
Fall	25 cfs	77 cfs	2 per season Trigger: 160 cfs Volume: 1,110 af Duration: 13 days

cfs = cubic feet per second
af = acre-feet

Figure: 30 TAC §298.380(c)(2)

United States Geological Survey Gage 08167500, Guadalupe River near Spring Branch

Season	Subsistence	Base	Pulse
Winter	18 cfs	100 cfs	2 per season Trigger: 210 cfs Volume: 1,520 af Duration: 11 days
Spring	18 cfs	91 cfs	2 per season Trigger: 870 cfs Volume: 6,500 af Duration: 19 days
Summer	18 cfs	64 cfs	2 per season Trigger: 240 cfs Volume: 1,520 af Duration: 11 days
Fall	18 cfs	100 cfs	2 per season Trigger: 230 cfs Volume: 1,660 af Duration: 12 days

cfs = cubic feet per second
af = acre-feet

Figure: 30 TAC §298.380(c)(3)

United States Geological Survey Gage 08171000, Blanco River at Wimberley

Season	Subsistence	Base	Pulse
Winter	10 cfs	34 cfs	2 per season Trigger: 54 cfs Volume: 360 af Duration: 10 days
Spring	13 cfs	40 cfs	2 per season Trigger: 360 cfs Volume: 2,370 af Duration: 18 days
Summer	8 cfs	36 cfs	2 per season Trigger: 74 cfs Volume: 410 af Duration: 9 days
Fall	10 cfs	36 cfs	2 per season Trigger: 82 cfs Volume: 500 af Duration: 10 days

cfs = cubic feet per second
af = acre-feet

Figure: 30 TAC §298.380(c)(4)

United States Geological Survey Gage 08172000, San Marcos River at Luling

Season	Subsistence	Base	Pulse
Winter	89 cfs	160 cfs	2 per season Trigger: 340 cfs Volume: 1,800 af Duration: 8 days
Spring	89 cfs	160 cfs	2 per season Trigger: 1,140 cfs Volume: 6,800 af Duration: 14 days
Summer	73 cfs	170 cfs	2 per season Trigger: 240 cfs Volume: 1,090 af Duration: 6 days
Fall	81 cfs	170 cfs	2 per season Trigger: 540 cfs Volume: 2,740 af Duration: 9 days

cfs = cubic feet per second
af = acre-feet

Figure: 30 TAC §298.380(c)(5)

United States Geological Survey Gage 08173000, Plum Creek near Luling

Season	Subsistence	Base	Pulse
Winter	3 cfs	8 cfs	2 per season Trigger: 350 cfs Volume: 1,800 af Duration: 17 days
Spring	2 cfs	6 cfs	2 per season Trigger: 720 cfs Volume: 3,300 af Duration: 17 days
Summer	1 cfs	3 cfs	2 per season Trigger: 48 cfs Volume: 230 af Duration: 10 days
Fall	1 cfs	5 cfs	2 per season Trigger: 150 cfs Volume: 720 af Duration: 13 days

cfs = cubic feet per second
af = acre-feet

Figure: 30 TAC §298.380(c)(6)

United States Geological Survey Gage 08173900, Guadalupe River at Gonzales

Season	Subsistence	Base	Pulse
Winter	210 cfs	796 cfs	2 per season Trigger: 1,150 cfs Volume: 9,640 af Duration: 13 days
Spring	210 cfs	791 cfs	2 per season Trigger: 3,250 cfs Volume: 26,900 af Duration: 17 days
Summer	210 cfs	727 cfs	2 per season Trigger: 1,760 cfs Volume: 14,800 af Duration: 14 days
Fall	180 cfs	746 cfs	2 per season Trigger: 1,410 cfs Volume: 11,400 af Duration: 13 days

cfs = cubic feet per second
af = acre-feet

Figure: 30 TAC §298.380(c)(7)

United States Geological Survey Gage 08175000, Sandies Creek near Westhoff

Season	Subsistence	Base	Pulse
Winter	4 cfs	10 cfs	2 per season Trigger: 300 cfs Volume: 1,880 af Duration: 16 days
Spring	1 cfs	6 cfs	2 per season Trigger: 440 cfs Volume: 2,710 af Duration: 18 days
Summer	1 cfs	3 cfs	2 per season Trigger: 59 cfs Volume: 330 af Duration: 11 days
Fall	2 cfs	6 cfs	2 per season Trigger: 150 cfs Volume: 960 af Duration: 14 days

cfs = cubic feet per second
af = acre-feet

Figure: 30 TAC §298.380(c)(8)

United States Geological Survey Gage 08175800, Guadalupe River at Cuero

Season	Subsistence	Base	Pulse
Winter	130 cfs	980 cfs	2 per season Trigger: 1,610 cfs Volume: 14,100 af Duration: 13 days
Spring	120 cfs	940 cfs	2 per season Trigger: 3,370 cfs Volume: 31,800 af Duration: 18 days
Summer	130 cfs	800 cfs	2 per season Trigger: 2,110 cfs Volume: 19,300 af Duration: 17 days
Fall	86 cfs	870 cfs	2 per season Trigger: 1,730 cfs Volume: 14,100 af Duration: 13 days

cfs = cubic feet per second
af = acre-feet

Figure: 30 TAC §298.380(c)(9)

United States Geological Survey Gage 08176500, Guadalupe River at Victoria

Season	Subsistence	Base	Pulse
Winter	160 cfs	975 cfs	2 per season Trigger: 1,690 cfs Volume: 14,400 af Duration: 13 days
Spring	130 cfs	945 cfs	2 per season Trigger: 3,300 cfs Volume: 33,000 af Duration: 18 days
Summer	150 cfs	795 cfs	2 per season Trigger: 2,060 cfs Volume: 19,200 af Duration: 16 days
Fall	110 cfs	865 cfs	2 per season Trigger: 1,880 cfs Volume: 15,600 af Duration: 13 days

cfs = cubic feet per second
af = acre-feet

Figure: 30 TAC §298.380(c)(10)

United States Geological Survey Gage 08178880, Medina River at Bandera

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**
Winter	Dry	6 cfs	17 cfs	Trigger: 53 cfs Volume: 400 af Duration: 12 days	Trigger: 110 cfs Volume: 960 af Duration: 17 days
Winter	Average	N/A	32 cfs		
Winter	Wet	N/A	54 cfs		
Spring	Dry	7 cfs	10 cfs	Trigger: 110 cfs Volume: 900 af Duration: 17 days	Trigger: 480 cfs Volume: 4,190 af Duration: 28 days
Spring	Average	N/A	22 cfs		
Spring	Wet	N/A	48 cfs		
Summer	Dry	1 cfs	6 cfs	Trigger: 94 cfs Volume: 670 af Duration: 14 days	Trigger: 340 cfs Volume: 2,310 af Duration: 21 days
Summer	Average	N/A	16 cfs		
Summer	Wet	N/A	41 cfs		
Fall	Dry	2 cfs	16 cfs	Trigger: 68 cfs Volume: 500 af Duration: 14 days	Trigger: 220 cfs Volume: 1,930 af Duration: 24 days
Fall	Average	N/A	33 cfs		
Fall	Wet	N/A	49 cfs		

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

Figure: 30 TAC §298.380(c)(11)

United States Geological Survey Gage 08181500, Medina River at San Antonio

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**
Winter	Dry	14 cfs	20 cfs	Trigger: 120 cfs Volume: 970 af Duration: 15 days	Trigger: 350 cfs Volume: 3,570 af Duration: 27 days
Winter	Average	N/A	53 cfs		
Winter	Wet	N/A	71 cfs		
Spring	Dry	12 cfs	37 cfs	Trigger: 380 cfs Volume: 2,680 af Duration: 17 days	Trigger: 1,000 cfs Volume: 7,950 af Duration: 27 days
Spring	Average	N/A	62 cfs		
Spring	Wet	N/A	77 cfs		
Summer	Dry	8 cfs	33 cfs	Trigger: 140 cfs Volume: 860 af Duration: 12 days	Trigger: 440 cfs Volume: 3,050 af Duration: 21 days
Summer	Average	N/A	57 cfs		
Summer	Wet	N/A	72 cfs		
Fall	Dry	13 cfs	27 cfs	Trigger: 130 cfs Volume: 930 af Duration: 14 days	Trigger: 450 cfs Volume: 3,890 af Duration: 28 days
Fall	Average	N/A	60 cfs		
Fall	Wet	N/A	74 cfs		

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

Figure: 30 TAC §298.380(c)(12)(A)

United States Geological Survey Gage 08181800, San Antonio River near Elmendorf: Subsistence Flows, Base Flows, and Small Seasonal Pulses

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (1 per season)**
Winter	Dry	60 cfs	115 cfs	Trigger: 830 cfs Volume: 6,210 af Duration: 14 days
Winter	Average	N/A	262 cfs	
Winter	Wet	N/A	328 cfs	
Spring	Dry	60 cfs	106 cfs	Trigger: 1,560 cfs Volume: 10,700 af Duration: 16 days
Spring	Average	N/A	237 cfs	
Spring	Wet	N/A	364 cfs	
Summer	Dry	60 cfs	87 cfs	Trigger: 1,110 cfs Volume: 6,460 af Duration: 12 days
Summer	Average	N/A	178 cfs	
Summer	Wet	N/A	341 cfs	
Fall	Dry	60 cfs	92 cfs	Trigger: 1,010 cfs Volume: 6,570 af Duration: 13 days
Fall	Average	N/A	223 cfs	
Fall	Wet	N/A	367 cfs	

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

Figure: 30 TAC §298.380(c)(12)(B)

United States Geological Survey Gage 08181800, San Antonio River near Elmendorf: Large Pulses

Time Period	Frequency	Trigger	Duration
April through June	3 per time period	3,000 cfs	2 days
May through June	2 per time period	4,000 cfs	2 days
July through November	2 per time period	4,000 cfs	2 days

cfs = cubic feet per second

Figure: 30 TAC §298.380(c)(13)(A)

United States Geological Survey Gage 08183500, San Antonio River near Falls City:
Subsistence Flows, Base Flows, and Small Seasonal Pulses

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (1 per season)**
Winter	Dry	60 cfs	152 cfs	Trigger: 830 cfs Volume: 6,330 af Duration: 16 days
Winter	Average	N/A	292 cfs	
Winter	Wet	N/A	424 cfs	
Spring	Dry	60 cfs	137 cfs	Trigger: 1,670 cfs Volume: 12,300 af Duration: 19 days
Spring	Average	N/A	264 cfs	
Spring	Wet	N/A	467 cfs	
Summer	Dry	60 cfs	113 cfs	Trigger: 1,030 cfs Volume: 6,440 af Duration: 14 days
Summer	Average	N/A	199 cfs	
Summer	Wet	N/A	430 cfs	
Fall	Dry	60 cfs	117 cfs	Trigger: 850 cfs Volume: 5,690 af Duration: 14 days
Fall	Average	N/A	246 cfs	
Fall	Wet	N/A	479 cfs	

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

Figure: 30 TAC §298.380(c)(13)(B)

United States Geological Survey Gage 08183500, San Antonio River near Falls City: Large Pulses

Time Period	Frequency	Trigger	Duration
April through June	3 per time period	4,000 cfs	2 days
February through April	2 per time period	4,000 cfs	2 days
July through November	2 per time period	6,500 cfs	2 days

cfs = cubic feet per second

Figure: 30 TAC §298.380(c)(14)(A)

United States Geological Survey Gage 08186000, Cibolo Creek near Falls City
Subsistence Flows, Base Flows, and Small Seasonal Pulses

Season	Hydrologic Condition	Subsistence	Base	Small Seasonal Pulse
Winter	Dry	8 cfs	20 cfs	Trigger: 570 cfs Volume: 3,200 af Duration: 20 days Frequency: 1 per season
Winter	Average	N/A	28 cfs	
Winter	Wet	N/A	39 cfs	
Spring	Dry	8 cfs	16 cfs	N/A
Spring	Average	N/A	28 cfs	
Spring	Wet	N/A	44 cfs	
Summer	Dry	8 cfs	11 cfs	Trigger: 390 cfs Volume: 1,990 af Duration: 15 days Frequency: 1 per season
Summer	Average	N/A	20 cfs	
Summer	Wet	N/A	37 cfs	
Fall	Dry	8 cfs	13 cfs	Trigger: 190 cfs Volume: 1,000 af Duration: 13 days Frequency: 2 per season
Fall	Average	N/A	24 cfs	
Fall	Wet	N/A	40 cfs	

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

Figure: 30 TAC §298.380(c)(14)(B)

United States Geological Survey Gage 08186000, Cibolo Creek near Falls City: Large Pulses

Time Period	Frequency	Trigger	Duration
April through June	3 per time period	1,000 cfs	2 days
July through October	2 per time period	1,000 cfs	2 days
July through November	2 per time period	2,500 cfs	2 days

cfs = cubic feet per second

Figure: 30 TAC §298.380(c)(15)(A)

United States Geological Survey Gage 08188500, San Antonio River at Goliad:
Subsistence Flows, Base Flows, and Small Seasonal Pulses

Season	Hydrologic Condition	Subsistence	Base	Small Seasonal Pulse
Winter	Dry	60 cfs	200 cfs	Trigger: 1,520 cfs Volume: 12,800 af Duration: 19 days Frequency: 1 per season
Winter	Average	N/A	329 cfs	
Winter	Wet	N/A	469 cfs	
Spring	Dry	60 cfs	174 cfs	Trigger: 1,570 cfs Volume: 11,300 af Duration: 16 days Frequency: 2 per season
Spring	Average	N/A	313 cfs	
Spring	Wet	N/A	502 cfs	
Summer	Dry	60 cfs	139 cfs	Trigger: 1,640 cfs Volume: 11,200 af Duration: 16 days Frequency: 1 per season
Summer	Average	N/A	237 cfs	
Summer	Wet	N/A	481 cfs	
Fall	Dry	60 cfs	367 cfs	Trigger: 2,320 cfs Volume: 17,600 af Duration: 19 days Frequency: 1 per season
Fall	Average	N/A	280 cfs	
Fall	Wet	N/A	584 cfs	

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

Figure: 30 TAC §298.380(c)(15)(B)

United States Geological Survey Gage 08188500, San Antonio River at Goliad: Large Pulses

Time Period	Frequency	Trigger	Duration
April through June	3 per time period	4,000 cfs	2 days
February through April	2 per time period	4,000 cfs	2 days
July through November	2 per time period	8,000 cfs	2 days

cfs = cubic feet per second

Figure: 30 TAC §298.380(c)(16)

United States Geological Survey Gage 08189500, Mission River at Refugio

Season	**Hydrologic Condition**	**Subsistence**	**Base**	**Small Seasonal Pulse (2 per season)**	**Large Seasonal Pulse (1 per season)**
Winter	Dry	3 cfs	5 cfs	Trigger: 60 cfs Volume: 310 af Duration: 8 days	Trigger: 450 cfs Volume: 2,340 af Duration: 15 days
Winter	Average	N/A	9 cfs		
Winter	Wet	N/A	15 cfs		
Spring	Dry	2 cfs	5 cfs	Trigger: 320 cfs Volume: 1,440 af Duration: 10 days	Trigger: 1,560 cfs Volume: 7,910 af Duration: 18 days
Spring	Average	N/A	8 cfs		
Spring	Wet	N/A	14 cfs		
Summer	Dry	1 cfs	4 cfs	Trigger: 57 cfs Volume: 240 af Duration: 6 days	Trigger: 420 cfs Volume: 2,010 af Duration: 12 days
Summer	Average	N/A	7 cfs		
Summer	Wet	N/A	12 cfs		
Fall	Dry	2 cfs	5 cfs	Trigger: 45 cfs Volume: 200 af Duration: 6 days	Trigger: 410 cfs Volume: 2,090 af Duration: 14 days
Fall	Average	N/A	8 cfs		
Fall	Wet	N/A	15 cfs		

cfs = cubic feet per second
af = acre-feet
N/A = not applicable

H.B. No. 3

AN ACT

relating to the management of the water resources of the state, including the protection of instream flows and freshwater inflows, and to the management of groundwater in the area regulated by the Edwards Aquifer Authority and to the operations and oversight of the authority.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF TEXAS:

ARTICLE 1. MANAGEMENT OF STATE WATER

SECTION 1.01. The heading to Section 5.506, Water Code, is amended to read as follows:

Sec. 5.506. EMERGENCY SUSPENSION OF PERMIT CONDITION RELATING TO<u>, AND EMERGENCY AUTHORITY TO MAKE AVAILABLE WATER SET ASIDE FOR,</u> BENEFICIAL INFLOWS TO AFFECTED BAYS AND ESTUARIES AND INSTREAM USES.

SECTION 1.02. Section 5.506, Water Code, is amended by adding Subsection (a-1) and amending Subsections (b) and (c) to read as follows:

<u>(a-1) State water that is set aside by the commission to meet the needs for freshwater inflows to affected bays and estuaries and instream uses under Section 11.1471(a)(2) may be made available temporarily for other essential beneficial uses if the commission finds that an emergency exists that cannot practically be resolved in another way.</u>

(b) The commission must give written notice of the proposed

action [~~suspension~~] to the Parks and Wildlife Department before the commission suspends a permit condition under Subsection (a) or makes water available temporarily under Subsection (a-1) [~~this section~~]. The commission shall give the Parks and Wildlife Department an opportunity to submit comments on the proposed action [~~suspension~~] for a period of 72 hours from receipt of the notice and must consider those comments before issuing an order implementing the proposed action [~~imposing the suspension~~].

(c) The commission may suspend a permit condition under Subsection (a) or make water available temporarily under Subsection (a-1) [~~this section~~] without notice except as required by Subsection (b).

SECTION 1.03. Section 5.701(j), Water Code, is amended to read as follows:

(j) The fee for other uses of water not specifically named in this section is $1 per acre-foot, except that no political subdivision may be required to pay fees to use water for recharge of underground freshwater-bearing sands and aquifers or for abatement of natural pollution. A fee is not required for a water right that is [~~This fee is waived for applications for instream-use water rights~~] deposited into the Texas Water Trust.

SECTION 1.04. Section 11.002, Water Code, is amended by adding Subdivisions (15), (16), (17), (18), and (19) to read as follows:

(15) "Environmental flow analysis" means the application of a scientifically derived process for predicting the response of an ecosystem to changes in instream flows or freshwater

inflows.

(16) "Environmental flow regime" means a schedule of flow quantities that reflects seasonal and yearly fluctuations that typically would vary geographically, by specific location in a watershed, and that are shown to be adequate to support a sound ecological environment and to maintain the productivity, extent, and persistence of key aquatic habitats in and along the affected water bodies.

(17) "Environmental flow standards" means those requirements adopted by the commission under Section 11.1471.

(18) "Advisory group" means the environmental flows advisory group.

(19) "Science advisory committee" means the Texas environmental flows science advisory committee.

SECTION 1.05. Section 11.023(a), Water Code, is amended to read as follows:

(a) To the extent that state water has not been set aside by the commission under Section 11.1471(a)(2) to meet downstream instream flow needs or freshwater inflow needs, state [~~State~~] water may be appropriated, stored, or diverted for:

(1) domestic and municipal uses, including water for sustaining human life and the life of domestic animals;

(2) agricultural uses and industrial uses, meaning processes designed to convert materials of a lower order of value into forms having greater usability and commercial value, including the development of power by means other than hydroelectric;

(3) mining and recovery of minerals;

(4) hydroelectric power;

(5) navigation;

(6) recreation and pleasure;

(7) public parks; and

(8) game preserves.

SECTION 1.06. Section 11.0235, Water Code, is amended by amending Subsections (c) and (e) and adding Subsections (d-1) through (d-6) and (f) to read as follows:

(c) The legislature has expressly required the commission while balancing all other public interests to consider and, to the extent practicable, provide for the freshwater inflows and instream flows necessary to maintain the viability of the state's streams, rivers, and bay and estuary systems in the commission's regular granting of permits for the use of state waters. As an essential part of the state's environmental flows policy, all permit conditions relating to freshwater inflows to affected bays and estuaries and instream flow needs must be subject to temporary suspension if necessary for water to be applied to essential beneficial uses during emergencies.

(d-1) The legislature has determined that existing water rights that are converted to water rights for environmental purposes should be enforced in a manner consistent with the enforcement of water rights for other purposes as provided by the laws of this state governing the appropriation of state water.

(d-2) The legislature finds that to provide certainty in water management and development and to provide adequate protection of the state's streams, rivers, and bays and estuaries, the state

must have a process with specific timelines for prompt action to address environmental flow issues in the state's major basin and bay systems, especially those systems in which unappropriated water is still available.

(d-3) The legislature finds that:

(1) in those basins in which water is available for appropriation, the commission should establish an environmental set-aside below which water should not be available for appropriation; and

(2) in those basins in which the unappropriated water that will be set aside for instream flow and freshwater inflow protection is not sufficient to fully satisfy the environmental flow standards established by the commission, a variety of market approaches, both public and private, for filling the gap must be explored and pursued.

(d-4) The legislature finds that while the state has pioneered tools to address freshwater inflow needs for bays and estuaries, there are limitations to those tools in light of both scientific and public policy evolution. To fully address bay and estuary environmental flow issues, the foundation of work accomplished by the state should be improved. While the state's instream flow studies program appears to encompass a comprehensive and scientific approach for establishing a process to assess instream flow needs for rivers and streams across the state, more extensive review and examination of the details of the program, which may not be fully developed until the program is under way, are needed to ensure an effective tool for evaluating riverine

environmental flow conditions.

(d-5) The legislature finds that the management of water to meet instream flow and freshwater inflow needs should be evaluated on a regular basis and adapted to reflect both improvements in science related to environmental flows and future changes in projected human needs for water. In addition, the development of management strategies for addressing environmental flow needs should be an ongoing, adaptive process that considers and addresses local issues.

(d-6) The legislature finds that recommendations for state action to protect instream flows and freshwater inflows should be developed through a consensus-based, regional approach involving balanced representation of stakeholders and that such a process should be encouraged throughout the state.

(e) The fact that greater pressures and demands are being placed on the water resources of the state makes it of paramount importance to ensure [~~reexamine the process for ensuring~~] that these important priorities are effectively addressed by detailing how environmental flow standards are to be developed using the environmental studies that have been and are to be performed by the state and others and specifying in clear delegations of authority how those environmental flow standards will be integrated into the regional water planning and water permitting process [~~to the commission~~].

(f) The legislature recognizes that effective implementation of the approach provided by this chapter for protecting instream flows and freshwater inflows will require more

effective water rights administration and enforcement systems than are currently available in most areas of the state.

SECTION 1.07. Subchapter B, Chapter 11, Water Code, is amended by adding Sections 11.0236, 11.02361, 11.02362, and 11.0237 to read as follows:

Sec. 11.0236. ENVIRONMENTAL FLOWS ADVISORY GROUP. (a) In recognition of the importance that the ecological soundness of our riverine, bay, and estuary systems and riparian lands has on the economy, health, and well-being of the state there is created the environmental flows advisory group.

(b) The advisory group is composed of nine members as follows:

(1) three members appointed by the governor;

(2) three members of the senate appointed by the lieutenant governor; and

(3) three members of the house of representatives appointed by the speaker of the house of representatives.

(c) Of the members appointed under Subsection (b)(1):

(1) one member must be a member of the commission;

(2) one member must be a member of the board; and

(3) one member must be a member of the Parks and Wildlife Commission.

(d) Each member of the advisory group serves at the will of the person who appointed the member.

(e) The appointed senator with the most seniority and the appointed house member with the most seniority serve together as co-presiding officers of the advisory group.

(f) A member of the advisory group is not entitled to receive compensation for service on the advisory group but is entitled to reimbursement of the travel expenses incurred by the member while conducting the business of the advisory group, as provided by the General Appropriations Act.

(g) The advisory group may accept gifts and grants from any source to be used to carry out a function of the advisory group.

(h) The commission shall provide staff support for the advisory group.

(i) The advisory group shall conduct public hearings and study public policy implications for balancing the demands on the water resources of the state resulting from a growing population with the requirements of the riverine, bay, and estuary systems including granting permits for instream flows dedicated to environmental needs or bay and estuary inflows, use of the Texas Water Trust, and any other issues that the advisory group determines have importance and relevance to the protection of environmental flows. In evaluating the options for providing adequate environmental flows, the advisory group shall take notice of the strong public policy imperative that exists in this state recognizing that environmental flows are important to the biological health of our public and private lands, streams and rivers, and bay and estuary systems and are high priorities in the water management process. The advisory group shall specifically address:

(1) ways that the ecological soundness of those systems will be ensured in the water rights administration and

enforcement and water allocation processes; and

(2) appropriate methods to encourage persons voluntarily to convert reasonable amounts of existing water rights to use for environmental flow protection temporarily or permanently.

(j) The advisory group may adopt rules, procedures, and policies as needed to administer this section, to implement its responsibilities, and to exercise its authority under Sections 11.02361 and 11.02362.

(k) Chapter 2110, Government Code, does not apply to the size, composition, or duration of the advisory group.

(l) Not later than December 1, 2008, and every two years thereafter, the advisory group shall issue and promptly deliver to the governor, lieutenant governor, and speaker of the house of representatives copies of a report summarizing:

(1) any hearings conducted by the advisory group;

(2) any studies conducted by the advisory group;

(3) any legislation proposed by the advisory group;

(4) progress made in implementing Sections 11.02361 and 11.02362; and

(5) any other findings and recommendations of the advisory group.

(m) The advisory group is abolished on the date that the commission has adopted environmental flow standards under Section 11.1471 for all of the river basin and bay systems in this state.

Sec. 11.02361. TEXAS ENVIRONMENTAL FLOWS SCIENCE ADVISORY COMMITTEE. (a) The Texas environmental flows science advisory

committee consists of at least five but not more than nine members appointed by the advisory group.

(b) The advisory group shall appoint to the science advisory committee persons who will provide an objective perspective and diverse technical expertise, including expertise in hydrology, hydraulics, water resources, aquatic and terrestrial biology, geomorphology, geology, water quality, computer modeling, and other technical areas pertinent to the evaluation of environmental flows.

(c) Members of the science advisory committee serve five-year terms expiring March 1. A vacancy on the science advisory committee is filled by appointment by the co-presiding officers of the advisory group for the unexpired term.

(d) Chapter 2110, Government Code, does not apply to the size, composition, or duration of the science advisory committee.

(e) The science advisory committee shall:

(1) serve as an objective scientific body to advise and make recommendations to the advisory group on issues relating to the science of environmental flow protection; and

(2) develop recommendations to help provide overall direction, coordination, and consistency relating to:

(A) environmental flow methodologies for bay and estuary studies and instream flow studies;

(B) environmental flow programs at the commission, the Parks and Wildlife Department, and the board; and

(C) the work of the basin and bay expert science teams described in Section 11.02362.

(f) To assist the advisory group to assess the extent to which the recommendations of the science advisory committee are considered and implemented, the commission, the Parks and Wildlife Department, and the board shall provide written reports to the advisory group, at intervals determined by the advisory group, that describe:

(1) the actions taken by each agency in response to each recommendation; and

(2) for each recommendation not implemented, the reason it was not implemented.

(g) The science advisory committee is abolished on the date the advisory group is abolished under Section 11.0236(m).

Sec. 11.02362. DEVELOPMENT OF ENVIRONMENTAL FLOW REGIME RECOMMENDATIONS. (a) For the purposes of this section, the advisory group, not later than November 1, 2007, shall define the geographical extent of each river basin and bay system in this state for the sole purpose of developing environmental flow regime recommendations under this section and adoption of environmental flow standards under Section 11.1471.

(b) The advisory group shall give priority in descending order to the following river basin and bay systems of the state for the purpose of developing environmental flow regime recommendations and adopting environmental flow standards:

(1) the river basin and bay system consisting of the Trinity and San Jacinto Rivers and Galveston Bay and the river basin and bay system consisting of the Sabine and Neches Rivers and Sabine Lake Bay;

(2) the river basin and bay system consisting of the Colorado and Lavaca Rivers and Matagorda and Lavaca Bays and the river basin and bay system consisting of the Guadalupe, San Antonio, Mission, and Aransas Rivers and Mission, Copano, Aransas, and San Antonio Bays; and

(3) the river basin and bay system consisting of the Nueces River and Corpus Christi and Baffin Bays, the river basin and bay system consisting of the Rio Grande, the Rio Grande estuary, and the Lower Laguna Madre, and the Brazos River and its associated bay and estuary system.

(c) For the river basin and bay systems listed in Subsection (b)(1):

(1) the advisory group shall appoint the basin and bay area stakeholders committee not later than November 1, 2007;

(2) the basin and bay area stakeholders committee shall establish a basin and bay expert science team not later than March 1, 2008;

(3) the basin and bay expert science team shall finalize environmental flow regime recommendations and submit them to the basin and bay area stakeholders committee, the advisory group, and the commission not later than March 1, 2009, except that at the request of the basin and bay area stakeholders committee for good cause shown, the advisory group may extend the deadline provided by this subdivision;

(4) the basin and bay area stakeholders committee shall submit to the commission its comments on and recommendations regarding the basin and bay expert science team's recommended

environmental flow regime not later than September 1, 2009; and

(5) the commission shall adopt the environmental flow standards as provided by Section 11.1471 not later than September 1, 2010.

(d) The advisory group shall appoint the basin and bay area stakeholders committees for the river basin and bay systems listed in Subsection (b)(2) not later than September 1, 2008, and shall appoint the basin and bay area stakeholders committees for the river basin and bay systems listed in Subsection (b)(3) not later than September 1, 2009. The advisory group shall establish a schedule for the performance of the tasks listed in Subsections (c)(2) through (5) with regard to the river basin and bay systems listed in Subsections (b)(2) and (3) that will result in the adoption of environmental flow standards for that river basin and bay system by the commission as soon as is reasonably possible. Each basin and bay area stakeholders committee and basin and bay expert science team for a river basin and bay system listed in Subsection (b)(2) or (3) shall make recommendations to the advisory group with regard to the schedule applicable to that river basin and bay system. The advisory group shall consider the recommendations of the basin and bay area stakeholders committee and basin and bay expert science team as well as coordinate with, and give appropriate consideration to the recommendations of, the commission, the Parks and Wildlife Department, and the board in establishing the schedule.

(e) For a river basin and bay system or a river basin that does not have an associated bay system in this state not listed in

Subsection (b), the advisory group shall establish a schedule for the development of environmental flow regime recommendations and the adoption of environmental flow standards. The advisory group shall develop the schedule in consultation with the commission, the Parks and Wildlife Department, the board, and the pertinent basin and bay area stakeholders committee and basin and bay expert science team. The advisory group may, on its own initiative or on request, modify a schedule established under this subsection to be more responsive to particular circumstances, local desires, changing conditions, or time-sensitive conflicts. This subsection does not prohibit, in a river basin and bay system for which the advisory group has not yet established a schedule for the development of environmental flow regime recommendations and the adoption of environmental flow standards, an effort to develop information on environmental flow needs and ways in which those needs can be met by a voluntary consensus-building process.

(f) The advisory group shall appoint a basin and bay area stakeholders committee for each river basin and bay system in this state for which a schedule for the development of environmental flow regime recommendations and the adoption of environmental flow standards is specified by or established under Subsection (c), (d), or (e). Chapter 2110, Government Code, does not apply to the size, composition, or duration of a basin and bay area stakeholders committee. Each committee must consist of at least 17 members. The membership of each committee must:

(1) reflect a fair and equitable balance of interest groups concerned with the particular river basin and bay system for

which the committee is established; and

(2) be representative of appropriate stakeholders, including the following if they have a presence in the particular river basin and bay system for which the committee is established:

(A) agricultural water users, including representatives of each of the following sectors:

(i) agricultural irrigation;

(ii) free-range livestock; and

(iii) concentrated animal feeding operation;

(B) recreational water users, including coastal recreational anglers and businesses supporting water recreation;

(C) municipalities;

(D) soil and water conservation districts;

(E) industrial water users, including representatives of each of the following sectors:

(i) refining;

(ii) chemical manufacturing;

(iii) electricity generation; and

(iv) production of paper products or timber;

(F) commercial fishermen;

(G) public interest groups;

(H) regional water planning groups;

(I) groundwater conservation districts;

(J) river authorities and other conservation and reclamation districts with jurisdiction over surface water; and

(K) environmental interests.

(g) Members of a basin and bay area stakeholders committee serve five-year terms expiring March 1. If a vacancy occurs on a committee, the remaining members of the committee by majority vote shall appoint a member to serve the remainder of the unexpired term.

(h) Meetings of a basin and bay area stakeholders committee must be open to the public.

(i) Each basin and bay area stakeholders committee shall establish a basin and bay expert science team for the river basin and bay system for which the committee is established. The basin and bay expert science team must be established not later than six months after the date the basin and bay area stakeholders committee is established. Chapter 2110, Government Code, does not apply to the size, composition, or duration of a basin and bay expert science team. Each basin and bay expert science team must be composed of technical experts with special expertise regarding the river basin and bay system or regarding the development of environmental flow regimes. A person may serve as a member of more than one basin and bay expert science team at the same time.

(j) The members of a basin and bay expert science team serve five-year terms expiring April 1. A vacancy on a basin and bay expert science team is filled by appointment by the pertinent basin and bay area stakeholders committee to serve the remainder of the unexpired term.

(k) The science advisory committee shall appoint one of its members to serve as a liaison to each basin and bay expert science team to facilitate coordination and consistency in environmental

flow activities throughout the state. The commission, the Parks and Wildlife Department, and the board shall provide technical assistance to each basin and bay expert science team, including information about the studies conducted under Sections 16.058 and 16.059, and may serve as nonvoting members of the basin and bay expert science team to facilitate the development of environmental flow regime recommendations.

(l) Where reasonably practicable, meetings of a basin and bay expert science team must be open to the public.

(m) Each basin and bay expert science team shall develop environmental flow analyses and a recommended environmental flow regime for the river basin and bay system for which the team is established through a collaborative process designed to achieve a consensus. In developing the analyses and recommendations, the science team must consider all reasonably available science, without regard to the need for the water for other uses, and the science team's recommendations must be based solely on the best science available. For the Rio Grande below Fort Quitman, any uses attributable to Mexican water flows must be excluded from environmental flow regime recommendations.

(n) Each basin and bay expert science team shall submit its environmental flow analyses and environmental flow regime recommendations to the pertinent basin and bay area stakeholders committee, the advisory group, and the commission in accordance with the applicable schedule specified by or established under Subsection (c), (d), or (e). The basin and bay area stakeholders committee and the advisory group may not change the environmental

flow analyses or environmental flow regime recommendations of the basin and bay expert science team.

(o) Each basin and bay area stakeholders committee shall review the environmental flow analyses and environmental flow regime recommendations submitted by the committee's basin and bay expert science team and shall consider them in conjunction with other factors, including the present and future needs for water for other uses related to water supply planning in the pertinent river basin and bay system. For the Rio Grande, the basin and bay area stakeholders committee shall also consider the water accounting requirements for any international water sharing treaty, minutes, and agreement applicable to the Rio Grande and the effects on allocation of water by the Rio Grande watermaster in the middle and lower Rio Grande. The Rio Grande basin and bay expert science team may not recommend any environmental flow regime that would result in a violation of a treaty or court decision. The basin and bay area stakeholders committee shall develop recommendations regarding environmental flow standards and strategies to meet the environmental flow standards and submit those recommendations to the commission and to the advisory group in accordance with the applicable schedule specified by or established under Subsection (c), (d), or (e). In developing its recommendations, the basin and bay area stakeholders committee shall operate on a consensus basis to the maximum extent possible.

(p) In recognition of the importance of adaptive management, after submitting its recommendations regarding environmental flow standards and strategies to meet the

environmental flow standards to the commission, each basin and bay area stakeholders committee, with the assistance of the pertinent basin and bay expert science team, shall prepare and submit for approval by the advisory group a work plan. The work plan must:

(1) establish a periodic review of the basin and bay environmental flow analyses and environmental flow regime recommendations, environmental flow standards, and strategies, to occur at least once every 10 years;

(2) prescribe specific monitoring, studies, and activities; and

(3) establish a schedule for continuing the validation or refinement of the basin and bay environmental flow analyses and environmental flow regime recommendations, the environmental flow standards adopted by the commission, and the strategies to achieve those standards.

(q) In accordance with the applicable schedule specified by or established under Subsection (c), (d), or (e), the advisory group, with input from the science advisory committee, shall review the environmental flow analyses and environmental flow regime recommendations submitted by each basin and bay expert science team. If appropriate, the advisory group shall submit comments on the analyses and recommendations to the commission for use by the commission in adopting rules under Section 11.1471. Comments must be submitted not later than six months after the date of receipt of the analyses and recommendations.

(r) Notwithstanding the other provisions of this section, in the event the commission, by permit or order, has established an

estuary advisory council with specific duties related to implementation of permit conditions for environmental flows, that council may continue in full force and effect and shall act as and perform the duties of the basin and bay area stakeholders committee under this section. The estuary advisory council shall add members from stakeholder groups and from appropriate science and technical groups, if necessary, to fully meet the criteria for membership established in Subsection (f) and shall operate under the provisions of this section.

(s) Each basin and bay area stakeholders committee and basin and bay expert science team is abolished on the date the advisory group is abolished under Section 11.0236(m).

Sec. 11.0237. WATER RIGHTS FOR INSTREAM FLOWS DEDICATED TO ENVIRONMENTAL NEEDS OR BAY AND ESTUARY INFLOWS. (a) The commission may not issue a new permit for instream flows dedicated to environmental needs or bay and estuary inflows. The commission may approve an application to amend an existing permit or certificate of adjudication to change the use to or add a use for instream flows dedicated to environmental needs or bay and estuary inflows.

(b) This section does not alter the commission's obligations under Section 11.042(b) or (c), 11.046(b), 11.085(k)(2)(F), 11.134(b)(3)(D), 11.147, 11.1471, 11.1491, 11.150, 11.152, 16.058, or 16.059.

SECTION 1.08. Section 11.082(b), Water Code, is amended to read as follows:

(b) The state may recover the penalties prescribed in Subsection (a) [~~of this section~~] by suit brought for that purpose in

a court of competent jurisdiction. The state may seek those penalties regardless of whether a watermaster has been appointed for the water division, river basin, or segment of a river basin where the unlawful use is alleged to have occurred.

SECTION 1.09. Section 11.0841, Water Code, is amended by adding Subsection (c) to read as follows:

(c) For purposes of this section, the Parks and Wildlife Department has:

(1) the rights of a holder of a water right that is held in the Texas Water Trust, including the right to file suit in a civil court to prevent the unlawful use of such a right;

(2) the right to act in the same manner that a holder of a water right may act to protect the holder's rights in seeking to prevent any person from appropriating water in violation of a set-aside established by the commission under Section 11.1471 to meet instream flow needs or freshwater inflow needs; and

(3) the right to file suit in a civil court to prevent the unlawful use of a set-aside established under Section 11.1471.

SECTION 1.10. Section 11.0842(a), Water Code, is amended to read as follows:

(a) If a person violates this chapter, a rule or order adopted under this chapter or Section 16.236 [~~of this code~~], or a permit, certified filing, or certificate of adjudication issued under this chapter, the commission may assess an administrative penalty against that person as provided by this section. The commission may assess an administrative penalty for a violation relating to a water division or a river basin or segment of a river

basin regardless of whether a watermaster has been appointed for the water division or river basin or segment of the river basin.

SECTION 1.11. Section 11.0843(a), Water Code, is amended to read as follows:

(a) Upon witnessing a violation of this chapter or a rule or order or a water right issued under this chapter, the executive director or a person designated by the executive director, including a watermaster or the watermaster's deputy, [~~as defined by commission rule,~~] may issue the alleged violator a field citation alleging that a violation has occurred and providing the alleged violator the option of either:

(1) without admitting to or denying the alleged violation, paying an administrative penalty in accordance with the predetermined penalty amount established under Subsection (b) [~~of this section~~] and taking remedial action as provided in the citation; or

(2) requesting a hearing on the alleged violation in accordance with Section 11.0842 [~~of this code~~].

SECTION 1.12. Section 11.134(b), Water Code, is amended to read as follows:

(b) The commission shall grant the application only if:

(1) the application conforms to the requirements prescribed by this chapter and is accompanied by the prescribed fee;

(2) unappropriated water is available in the source of supply;

(3) the proposed appropriation:

(A) is intended for a beneficial use;

(B) does not impair existing water rights or vested riparian rights;

(C) is not detrimental to the public welfare;

(D) considers any applicable environmental flow standards established under Section 11.1471 and, if applicable, the assessments performed under Sections 11.147(d) and (e) and Sections 11.150, 11.151, and 11.152; and

(E) addresses a water supply need in a manner that is consistent with the state water plan and the relevant approved regional water plan for any area in which the proposed appropriation is located, unless the commission determines that conditions warrant waiver of this requirement; and

(4) the applicant has provided evidence that reasonable diligence will be used to avoid waste and achieve water conservation as defined by [~~Subdivision (8)(B),~~] Section 11.002(8)(B) [~~11.002~~].

SECTION 1.13. Section 11.147, Water Code, is amended by amending Subsections (b), (d), and (e) and adding Subsections (e-1), (e-2), and (e-3) to read as follows:

(b) In its consideration of an application for a permit to store, take, or divert water, the commission shall assess the effects, if any, of the issuance of the permit on the bays and estuaries of Texas. For permits issued within an area that is 200 river miles of the coast, to commence from the mouth of the river thence inland, the commission shall include in the permit any conditions considered necessary to maintain beneficial inflows to

any affected bay and estuary system, to the extent practicable when considering all public interests and the studies mandated by Section 16.058 as evaluated under Section 11.1491[~~, those conditions considered necessary to maintain beneficial inflows to any affected bay and estuary system~~].

(d) In its consideration of an application to store, take, or divert water, the commission shall include in the permit, to the extent practicable when considering all public interests, those conditions considered by the commission necessary to maintain existing instream uses and water quality of the stream or river to which the application applies. In determining what conditions to include in the permit under this subsection, the commission shall consider among other factors:

(1) the studies mandated by Section 16.059; and

(2) any water quality assessment performed under Section 11.150.

(e) The commission shall include in the permit, to the extent practicable when considering all public interests, those conditions considered by the commission necessary to maintain fish and wildlife habitats. In determining what conditions to include in the permit under this subsection, the commission shall consider any assessment performed under Section 11.152.

(e-1) Any permit for a new appropriation of water or an amendment to an existing water right that increases the amount of water authorized to be stored, taken, or diverted must include a provision allowing the commission to adjust the conditions included in the permit or amended water right to provide for protection of

instream flows or freshwater inflows. With respect to an amended water right, the provision may not allow the commission to adjust a condition of the amendment other than a condition that applies only to the increase in the amount of water to be stored, taken, or diverted authorized by the amendment. This subsection does not affect an appropriation of or an authorization to store, take, or divert water under a permit or amendment to a water right issued before September 1, 2007. The commission shall adjust the conditions if the commission determines, through an expedited public comment process, that such an adjustment is appropriate to achieve compliance with applicable environmental flow standards adopted under Section 11.1471. The adjustment:

(1) in combination with any previous adjustments made under this subsection may not increase the amount of the pass-through or release requirement for the protection of instream flows or freshwater inflows by more than 12.5 percent of the annualized total of that requirement contained in the permit as issued or of that requirement contained in the amended water right and applicable only to the increase in the amount of water authorized to be stored, taken, or diverted under the amended water right;

(2) must be based on appropriate consideration of the priority dates and diversion locations of any other water rights granted in the same river basin that are subject to adjustment under this subsection; and

(3) must be based on appropriate consideration of any voluntary contributions to the Texas Water Trust, and of any

voluntary amendments to existing water rights to change the use of a specified quantity of water to or add a use of a specified quantity of water for instream flows dedicated to environmental needs or bay and estuary inflows as authorized by Section 11.0237(a), that actually contribute toward meeting the applicable environmental flow standards.

(e-2) Any water right holder who makes a contribution or amends a water right as described by Subsection (e-1)(3) is entitled to appropriate credit for the benefits of the contribution or amendment against the adjustment of the holder's water right under Subsection (e-1).

(e-3) Notwithstanding Subsections (b)-(e), for the purpose of determining the environmental flow conditions necessary to maintain freshwater inflows to an affected bay and estuary system, existing instream uses and water quality of a stream or river, or fish and aquatic wildlife habitats, the commission shall apply any applicable environmental flow standard, including any environmental flow set-aside, adopted under Section 11.1471 instead of considering the factors specified by those subsections.

SECTION 1.14. Subchapter D, Chapter 11, Water Code, is amended by adding Section 11.1471 to read as follows:

Sec. 11.1471. ENVIRONMENTAL FLOW STANDARDS AND SET-ASIDES. (a) The commission by rule shall:

(1) adopt appropriate environmental flow standards for each river basin and bay system in this state that are adequate to support a sound ecological environment, to the maximum extent reasonable considering other public interests and other relevant

factors;

(2) establish an amount of unappropriated water, if available, to be set aside to satisfy the environmental flow standards to the maximum extent reasonable when considering human water needs; and

(3) establish procedures for implementing an adjustment of the conditions included in a permit or an amended water right as provided by Sections 11.147(e-1) and (e-2).

(b) In adopting environmental flow standards for a river basin and bay system under Subsection (a)(1), the commission shall consider:

(1) the definition of the geographical extent of the river basin and bay system adopted by the advisory group under Section 11.02362(a) and the definition and designation of the river basin by the board under Section 16.051(c);

(2) the schedule established by the advisory group under Section 11.02362(d) or (e) for the adoption of environmental flow standards for the river basin and bay system, if applicable;

(3) the environmental flow analyses and the recommended environmental flow regime developed by the applicable basin and bay expert science team under Section 11.02362(m);

(4) the recommendations developed by the applicable basin and bay area stakeholders committee under Section 11.02362(o) regarding environmental flow standards and strategies to meet the flow standards;

(5) any comments submitted by the advisory group to the commission under Section 11.02362(q);

(6) the specific characteristics of the river basin and bay system;

(7) economic factors;

(8) the human and other competing water needs in the river basin and bay system;

(9) all reasonably available scientific information, including any scientific information provided by the science advisory committee; and

(10) any other appropriate information.

(c) Environmental flow standards adopted under Subsection (a)(1) must consist of a schedule of flow quantities, reflecting seasonal and yearly fluctuations that may vary geographically by specific location in a river basin and bay system.

(d) As provided by Section 11.023, the commission may not issue a permit for a new appropriation or an amendment to an existing water right that increases the amount of water authorized to be stored, taken, or diverted if the issuance of the permit or amendment would impair an environmental flow set-aside established under Subsection (a)(2). A permit for a new appropriation or an amendment to an existing water right that increases the amount of water authorized to be stored, taken, or diverted that is issued after the adoption of an applicable environmental flow set-aside must contain appropriate conditions to ensure protection of the environmental flow set-aside.

(e) An environmental flow set-aside established under Subsection (a)(2) for a river basin and bay system other than the middle and lower Rio Grande must be assigned a priority date

corresponding to the date the commission receives environmental flow regime recommendations from the applicable basin and bay expert science team and be included in the appropriate water availability models in connection with an application for a permit for a new appropriation or for an amendment to an existing water right that increases the amount of water authorized to be stored, taken, or diverted.

(f) An environmental flow standard or environmental flow set-aside adopted under Subsection (a) may be altered by the commission in a rulemaking process undertaken in accordance with a schedule established by the commission. In establishing a schedule, the commission shall consider the applicable work plan approved by the advisory group under Section 11.02362(p). The commission's schedule may not provide for the rulemaking process to occur more frequently than once every 10 years unless the work plan provides for a periodic review under Section 11.02362(p) to occur more frequently than once every 10 years. In that event, the commission may provide for the rulemaking process to be undertaken in conjunction with the periodic review if the commission determines that schedule to be appropriate. A rulemaking process undertaken under this subsection must provide for the participation of stakeholders having interests in the particular river basin and bay system for which the process is undertaken.

SECTION 1.15. The heading to Section 11.148, Water Code, is amended to read as follows:

Sec. 11.148. EMERGENCY SUSPENSION OF PERMIT CONDITIONS AND EMERGENCY AUTHORITY TO MAKE AVAILABLE WATER SET ASIDE FOR

ENVIRONMENTAL FLOWS.

SECTION 1.16. Section 11.148, Water Code, is amended by adding Subsection (a-1) and amending Subsections (b) and (c) to read as follows:

(a-1) State water that is set aside by the commission to meet the needs for freshwater inflows to affected bays and estuaries and instream uses under Section 11.1471(a)(2) may be made available temporarily for other essential beneficial uses if the commission finds that an emergency exists that cannot practically be resolved in another way.

(b) Before the commission suspends a permit condition under Subsection (a) or makes water available temporarily under Subsection (a-1) [~~of this section~~], it must give written notice to the Parks and Wildlife Department of the proposed action [~~suspension~~]. The commission shall give the Parks and Wildlife Department an opportunity to submit comments on the proposed action [~~suspension~~] within 72 hours from such time and the commission shall consider those comments before issuing its order implementing the proposed action [~~imposing the suspension~~].

(c) The commission may suspend the permit condition under Subsection (a) or make water available temporarily under Subsection (a-1) without notice to any other interested party other than the Parks and Wildlife Department as provided by Subsection (b) [~~of this section~~]. However, all affected persons shall be notified immediately by publication, and a hearing to determine whether the suspension should be continued shall be held within 15 days of the date on which the order to suspend is issued.

SECTION 1.17. Section 11.1491(a), Water Code, is amended to read as follows:

(a) The Parks and Wildlife Department and the commission shall have joint responsibility to review the studies prepared under Section 16.058 [~~of this code~~], to determine inflow conditions necessary for the bays and estuaries, and to provide information necessary for water resources management. Each agency shall designate an employee to share equally in the oversight of the program. Other responsibilities shall be divided between the Parks and Wildlife Department and the commission to maximize present in-house capabilities of personnel and to minimize costs to the state. Each agency shall have reasonable access to all information produced by the other agency. Publication of reports completed under this section shall be submitted for comment to [~~both~~] the commission, [~~and~~] the Parks and Wildlife Department, the advisory group, the science advisory committee, and any applicable basin and bay area stakeholders committee and basin and bay expert science team.

SECTION 1.18. Section 11.329(g), Water Code, is amended to read as follows:

(g) The commission may not assess costs under this section against a holder of a non-priority hydroelectric right that owns or operates privately owned facilities that collectively have a capacity of less than two megawatts or against a holder of a water right placed in the Texas Water Trust for a term of at least 20 years. [~~This subsection is not intended to affect in any way the fees assessed on a water right holder by the commission under~~

~~Section 1.29(d), Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993. For purposes of Section 1.29(d), Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993, a holder of a non-priority hydroelectric right that owns or operates privately owned facilities that collectively have a capacity of less than two megawatts shall be assessed fees at the same rate per acre-foot charged to a holder of a non-priority hydroelectric right that owns or operates privately owned facilities that collectively have a capacity of more than two megawatts.~~]

SECTION 1.19. Section 11.404(e), Water Code, is amended to read as follows:

(e) The court may not assess costs and expenses under this section against:

(1) a holder of a non-priority hydroelectric right that owns or operates privately owned facilities that collectively have a capacity of less than two megawatts; or

(2) a holder of a water right placed in the Texas Water Trust for a term of at least 20 years.

SECTION 1.20. Subchapter I, Chapter 11, Water Code, is amended by adding Section 11.4531 to read as follows:

Sec. 11.4531. WATERMASTER ADVISORY COMMITTEE. (a) For each river basin or segment of a river basin for which the executive director appoints a watermaster under this subchapter, the executive director shall appoint a watermaster advisory committee consisting of at least nine but not more than 15 members. A member of the advisory committee must be a holder of a water right or a representative of a holder of a water right in the river basin or

segment of the river basin for which the watermaster is appointed. In appointing members to the advisory committee, the executive director shall consider:

(1) geographic representation;

(2) amount of water rights held;

(3) different types of holders of water rights and users, including water districts, municipal suppliers, irrigators, and industrial users; and

(4) experience and knowledge of water management practices.

(b) An advisory committee member is not entitled to reimbursement of expenses or to compensation.

(c) An advisory committee member serves a two-year term expiring August 31 of each odd-numbered year and holds office until a successor is appointed.

(d) The advisory committee shall meet within 30 days after the date the initial appointments have been made and shall select a presiding officer to serve a one-year term. The committee shall meet regularly as necessary.

(e) The advisory committee shall:

(1) make recommendations to the executive director regarding activities of benefit to the holders of water rights in the administration and distribution of water to holders of water rights in the river basin or segment of the river basin for which the watermaster is appointed;

(2) review and comment to the executive director on the annual budget of the watermaster operation; and

(3) perform other advisory duties as requested by the executive director regarding the watermaster operation or as requested by holders of water rights and considered by the committee to benefit the administration of water rights in the river basin or segment of the river basin for which the watermaster is appointed.

SECTION 1.21. Sections 11.454 and 11.455, Water Code, are amended to read as follows:

Sec. 11.454. DUTIES AND AUTHORITY OF THE WATERMASTER. Section 11.327 applies to the duties and authority of a watermaster appointed for a river basin or segment of a river basin under this subchapter in the same manner as that section applies to the duties and authority of a watermaster appointed for a water division under Subchapter G [~~A watermaster as the agent of the commission and under the executive director's supervision shall:~~

[~~(1) divide the water of the streams or other sources of supply of his segment or basin in accordance with the authorized water rights;~~

[~~(2) regulate or cause to be regulated the controlling works of reservoirs and diversion works in time of water shortage, as is necessary because of the rights existing in the streams of his segment or basin, or as is necessary to prevent the waste of water or its diversion, taking, storage, or use in excess of the quantities to which the holders of water rights are lawfully entitled; and~~

[~~(3) perform any other duties and exercise any authority directed by the commission~~].

Sec. 11.455. COMPENSATION AND EXPENSES OF WATERMASTER [~~ASSESSMENTS~~]. (a) Section 11.329 applies to the payment of the compensation and expenses of a watermaster appointed for a river basin or segment of a river basin under this subchapter in the same manner as that section applies to the payment of the compensation and expenses of a watermaster appointed for a water division under Subchapter G.

(b) The executive director shall deposit the assessments collected under this section to the credit of the watermaster fund.

(c) Money deposited under this section to the credit of the watermaster fund may be used only for the purposes specified by Section 11.3291 with regard to the watermaster operation under this subchapter with regard to which the assessments were collected [~~The commission may assess the costs of the watermaster against all persons who hold water rights in the river basin or segment of the river basin under the watermaster's jurisdiction in accordance with Section 11.329 of this code~~].

SECTION 1.22. Subchapter F, Chapter 15, Water Code, is amended by adding Section 15.4063 to read as follows:

Sec. 15.4063. ENVIRONMENTAL FLOWS FUNDING. The board may authorize the use of money in the research and planning fund:

(1) to compensate the members of the Texas environmental flows science advisory committee established under Section 11.02361 for attendance and participation at meetings of the committee and for transportation, meals, lodging, or other travel expenses associated with attendance at those meetings as provided by the General Appropriations Act;

(2) for contracts with cooperating state and federal agencies and universities and with private entities as necessary to provide technical assistance to enable the Texas environmental flows science advisory committee and the basin and bay expert science teams established under Section 11.02362 to perform their statutory duties;

(3) to compensate the members of the basin and bay expert science teams established under Section 11.02362 for attendance and participation at meetings of the basin and bay expert science teams and for transportation, meals, lodging, or other travel expenses associated with attendance at those meetings as provided by the General Appropriations Act; and

(4) for contracts with political subdivisions designated as representatives of basin and bay area stakeholders committees established under Section 11.02362 to fund all or part of the administrative expenses incurred in conducting meetings of the basin and bay area stakeholders committees or the pertinent basin and bay expert science teams.

SECTION 1.23. Section 16.059(d), Water Code, is amended to read as follows:

(d) The priority studies shall be completed not later than December 31, 2016 [~~2010~~]. The Parks and Wildlife Department, the commission, and the board shall establish a work plan that prioritizes the studies and that sets interim deadlines providing for publication of flow determinations for individual rivers and streams on a reasonably consistent basis throughout the prescribed study period. Before publication, completed studies shall be

submitted for comment to the commission, the board, and the Parks and Wildlife Department.

SECTION 1.24. Section 26.0135(h), Water Code, as amended by Chapters 234 and 965, Acts of the 77th Legislature, Regular Session, 2001, is reenacted and amended to read as follows:

(h) The commission shall apportion, assess, and recover the reasonable costs of administering the water quality management programs under this section from users of water and wastewater permit holders in the watershed according to the records of the commission generally in proportion to their right, through permit or contract, to use water from and discharge wastewater in the watershed. Irrigation water rights, [~~and~~] non-priority hydroelectric rights of a water right holder that owns or operates privately owned facilities that collectively have a capacity of less than two megawatts, and water rights held in the Texas Water Trust for terms of at least 20 years will not be subject to this assessment. The cost to river authorities and others to conduct water quality monitoring and assessment shall be subject to prior review and approval by the commission as to methods of allocation and total amount to be recovered. The commission shall adopt rules to supervise and implement the water quality monitoring, assessment, and associated costs. The rules shall ensure that water users and wastewater dischargers do not pay excessive amounts, that program funds are equitably apportioned among basins, that a river authority may recover no more than the actual costs of administering the water quality management programs called for in this section, and that no municipality shall be assessed cost for

any efforts that duplicate water quality management activities described in Section 26.177 [~~of this chapter~~]. The rules concerning the apportionment and assessment of reasonable costs shall provide for a recovery of not more than $5,000,000 annually. Costs recovered by the commission are to be deposited to the credit of the water resource management account and may be used only to accomplish the purposes of this section. The commission may apply not more than 10 percent of the costs recovered annually toward the commission's overhead costs for the administration of this section and the implementation of regional water quality assessments. The commission, with the assistance and input of each river authority, shall file a written report accounting for the costs recovered under this section with the governor, the lieutenant governor, and the speaker of the house of representatives on or before December 1 of each even-numbered year.

SECTION 1.25. Section 11.1491(b), Water Code, is repealed.

SECTION 1.26. (a) The governor, lieutenant governor, and speaker of the house of representatives shall appoint the initial members of the environmental flows advisory group as provided by Section 11.0236, Water Code, as added by this article, as soon as practicable on or after the effective date of this article.

(b) As soon as practicable after taking office, the initial members of the environmental flows advisory group shall appoint the initial members of the Texas environmental flows science advisory committee as provided by Section 11.02361, Water Code, as added by this article. The terms of the initial members of the committee expire March 1, 2012.

(c) The environmental flows advisory group shall appoint the members of each basin and bay area stakeholders committee as provided by Section 11.02362, Water Code, as added by this article. The terms of the initial members of each committee expire March 1 of the fifth year that begins after the year in which the initial appointments are made.

(d) Each basin and bay area stakeholders committee shall appoint the members of the basin and bay expert science team for the river basin and bay system for which the committee is established as provided by Section 11.02362, Water Code, as added by this article. The terms of the initial members of each team expire April 1 of the fifth year that begins after the year in which the initial appointments are made.

(e) The executive director of the Texas Commission on Environmental Quality shall appoint the members of the watermaster advisory committee under Section 11.4531, Water Code, as added by this article, for each river basin or segment of a river basin for which the executive director appoints a watermaster under Subchapter I, Chapter 11, Water Code. The terms of the initial members of each committee expire August 31 of the first odd-numbered year that begins after the year in which the initial appointments are made.

SECTION 1.27. The changes in law made by this article relating to a permit for a new appropriation of water or to an amendment to an existing water right that increases the amount of water authorized to be stored, taken, or diverted apply only to:

(1) water appropriated under a permit for a new

appropriation of water the application for which is pending with the Texas Commission on Environmental Quality on the effective date of this Act or is filed with the commission on or after that date; or

(2) the increase in the amount of water authorized to be stored, taken, or diverted under an amendment to an existing water right that increases the amount of water authorized to be stored, taken, or diverted and the application for which is pending with the Texas Commission on Environmental Quality on the effective date of this Act or is filed with the commission on or after that date.

ARTICLE 2. EDWARDS AQUIFER AUTHORITY

SECTION 2.01. Section 1.11, Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993, is amended by amending Subsection (f) and adding Subsections (f-1) and (f-2) to read as follows:

(f) The authority may own, finance, design, [~~contract with a person who uses water from the aquifer for the authority or that person to~~] construct, operate, or [~~own, finance, and~~] maintain recharge [~~water supply~~] facilities. [~~Management fees or special fees may not be used for purchasing or operating these facilities.~~] For the purpose of this subsection, "recharge [~~water supply~~] facility" means [~~includes~~] a dam, reservoir, [~~treatment facility, transmission facility,~~] or other method of recharge project and associated facilities, structures, or works but does not include a facility to recirculate water at Comal or San Marcos Springs.

(f-1) The authority shall provide written notice of the intent to own, finance, design, construct, operate, or maintain

recharge facilities to:

(1) each groundwater conservation district in the area in which the recharge facility will be located;

(2) the mayor of each municipality in the area in which the recharge facility will be located;

(3) the county judge of each county in the area in which the recharge facility will be located; and

(4) each member of the legislature who represents the area in which the proposed recharge facility will be located.

(f-2) Any entity within the county in which a recharge facility is to be constructed shall be provided opportunity for input and allowed to provide proposals for partnering with the authority to own, finance, design, construct, operate, or maintain the recharge facility.

SECTION 2.02. Sections 1.14(a), (c), (e), (f), and (h), Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993, are amended to read as follows:

(a) Authorizations to withdraw water from the aquifer and all authorizations and rights to make a withdrawal under this Act shall be limited in accordance with this section to:

(1) protect the water quality of the aquifer;

(2) protect the water quality of the surface streams to which the aquifer provides springflow;

(3) achieve water conservation;

(4) maximize the beneficial use of water available for withdrawal from the aquifer;

(5) recognize the extent of the hydro-geologic

connection and interaction between surface water and groundwater;

(6) protect aquatic and wildlife habitat;

(7) [~~(6)~~] protect species that are designated as threatened or endangered under applicable federal or state law; and

(8) [~~(7)~~] provide for instream uses, bays, and estuaries.

(c) Except as provided by Subsections [~~(d),~~] (f)[~~,~~] and (h) of this section and Section 1.26 of this article, for the period beginning January 1, 2008, the amount of permitted withdrawals from the aquifer may not exceed or be less than 572,000 [~~400,000~~] acre-feet of water for each calendar year, which is the sum of all regular permits issued or for which an application was filed and issuance was pending action by the authority as of January 1, 2005.

(e) The authority may not allow withdrawals from the aquifer through wells drilled after June 1, 1993, except for replacement, test, or exempt wells or to the extent that the authority approves an amendment to an initial regular permit to authorize a change in the point of withdrawal under that permit [~~additional water as provided by Subsection (d) and then on an interruptible basis~~].

(f) If the level of the aquifer is equal to or greater than 660 [~~650~~] feet above mean sea level as measured at Well J-17, the authority may authorize withdrawal from the San Antonio pool, on an uninterruptible basis, of permitted amounts. If the level of the aquifer is equal to or greater than 845 feet at Well J-27, the authority may authorize withdrawal from the Uvalde pool, on an uninterruptible basis, of permitted amounts. [~~The authority shall limit the additional withdrawals to ensure that springflows are not~~

~~affected during critical drought conditions.~~]

(h) To accomplish the purposes of this article, [~~by June 1, 1994,~~] the authority, through a program, shall implement and enforce water management practices, procedures, and methods to ensure that, not later than December 31, 2012, the continuous minimum springflows of the Comal Springs and the San Marcos Springs are maintained to protect endangered and threatened species to the extent required by federal law and to achieve other purposes provided by Subsection (a) of this section and Section 1.26 of this article. The authority from time to time as appropriate may revise the practices, procedures, and methods. To meet this requirement, the authority shall require:

(1) phased adjustments to [~~reductions in~~] the amount of water that may be used or withdrawn by existing users or categories of other users, including adjustments in accordance with the authority's critical period management plan established under Section 1.26 of this article; or

(2) implementation of alternative management practices, procedures, and methods.

SECTION 2.03. Section 1.16(g), Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993, is amended to read as follows:

(g) The authority shall issue an initial regular permit without a term, and an initial regular permit remains in effect until the permit is abandoned or[~~,~~] cancelled[~~, or retired~~].

SECTION 2.04. Section 1.19(b), Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993, is amended to read as

follows:

(b) Withdrawal of water under a term permit must be consistent with the authority's critical period management plan established under Section 1.26 of this article. A holder of a term permit may not withdraw water from the San Antonio pool of the aquifer unless:

(1) the level of the aquifer is higher than 675 [~~665~~] feet above sea level, as measured at Well J-17;

(2) the flow at Comal Springs as determined by Section 1.26(c) of this article is greater than 350 cubic feet per second; and

(3) the flow at San Marcos Springs as determined by Section 1.26(c) of this article is greater than 200 cubic feet per second.

SECTION 2.05. Section 1.22(a), Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993, is amended to read as follows:

(a) The authority may acquire permitted rights to use water from the aquifer for the purposes of:

(1) holding those rights in trust for sale or transfer of the water or the rights to persons within the authority's jurisdiction who may use water from the aquifer;

(2) holding those rights in trust as a means of managing overall demand on the aquifer; or

(3) holding those rights for resale [~~or retirement as a means of complying with pumping reduction requirements under this article; or~~

[~~(4) retiring those rights, including those rights already permitted~~].

SECTION 2.06. Article 1, Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993, is amended by amending Section 1.26 and adding Section 1.26A to read as follows:

Sec. 1.26. CRITICAL PERIOD MANAGEMENT PLAN. (a) After review of the recommendations received in the program document, as prescribed by Section 1.26A of this article, the [~~The~~] authority by rule shall adopt [~~prepare and coordinate implementation of~~] a [~~plan for~~] critical period management plan consistent with Sections 1.14(a), (f), and (h) of this article [~~on or before September 1, 1995~~]. The critical period management plan shall be adopted by the authority no later than six months after the authority's receipt of the program document. On adoption of the critical period management plan, the authority shall provide a written report to the governor, lieutenant governor, and speaker of the house of representatives describing the actions taken in response to each recommendation and, for each recommendation not implemented, the reason it was not implemented. The plan [~~mechanisms~~] must:

(1) distinguish between discretionary use and nondiscretionary use;

(2) require reductions of all discretionary use to the maximum extent feasible;

(3) require utility pricing, to the maximum extent feasible, to limit discretionary use by the customers of water utilities; [~~and~~]

(4) require reduction of nondiscretionary use by

permitted or contractual users, to the extent further reductions are necessary, in the reverse order of the following water use preferences:

(A) municipal, domestic, and livestock;

(B) industrial and crop irrigation;

(C) residential landscape irrigation;

(D) recreational and pleasure; and

(E) other uses that are authorized by law; and

(5) allow irrigation use to continue in order to permit the user to complete the irrigation of a crop in progress.

(b) In this section, "MSL" means the elevation above mean sea level, measured in feet, of the surface of the water in a well, and "CFS" means cubic feet per second. Not later than January 1, 2008, the authority shall, by rule, adopt and enforce a critical period management plan with withdrawal reduction percentages in the amounts indicated in Tables 1 and 2 whether according to the index well levels or the Comal or San Marcos Springs flow as applicable, for a total in critical period Stage IV of 40 percent of the permitted withdrawals under Table 1 and 35 percent under Table 2:

TABLE 1

CRITICAL PERIOD WITHDRAWAL REDUCTION STAGES

FOR THE SAN ANTONIO POOL

Comal Springs Flow cfs	San Marcos Springs Flow cfs	Index Well J-17 Level MSL	Critical Period Stage	Withdrawal Reduction-San Antonio Pool
<225	<96	<660	I	20%
<200	<80	<650	II	30%
<150	N/A	<640	III	35%
<100	N/A	<630	IV	40%

TABLE 2

CRITICAL PERIOD WITHDRAWAL REDUCTION STAGES

FOR THE UVALDE POOL

Withdrawal Reduction-Uvalde Pool	Index Well J-27 Level MSL	Critical Period Stage
N/A	---	I
5%	<850	II
20%	<845	III
35%	<842	IV

(c) A change to a critical period stage with higher withdrawal reduction percentages is triggered if the 10-day average of daily springflows at the Comal Springs or the San Marcos Springs or the 10-day average of daily aquifer levels at the J-17 Index Well drops below the lowest number of any of the trigger levels indicated in Table 1. A change to a critical period stage with lower withdrawal reduction percentages is triggered only when the 10-day average of daily springflows at the Comal Springs and the San Marcos Springs and the 10-day average of daily aquifer levels at the J-17 Index Well are all above the same stage trigger level. The authority may adjust the withdrawal percentages for Stage IV in Tables 1 and 2 if necessary in order to comply with Subsection (d) or (e) of this section.

(d) Beginning September 1, 2007, the authority may not require the volume of permitted withdrawals to be less than an annualized rate of 340,000 acre-feet, under critical period Stage IV.

(e) After January 1, 2013, the authority may not require the volume of permitted withdrawals to be less than an annualized rate

of 320,000 acre-feet, under critical period Stage IV unless, after review and consideration of the recommendations provided under Section 1.26A of this article, the authority determines that a different volume of withdrawals is consistent with Sections 1.14(a), (f), and (h) of this article in maintaining protection for federally listed threatened and endangered species associated with the aquifer to the extent required by federal law.

(f) Notwithstanding Subsections (d) and (e) of this section, the authority may require further withdrawal reductions before reviewing and considering the recommendations provided under Section 1.26A of this article if the discharge of Comal Springs or San Marcos Springs declines an additional 15 percent after Stage IV withdrawal reductions are imposed under Subsection (b) of this section. This subsection expires on the date that critical period management plan rules adopted by the authority based on the recommendations provided under Section 1.26A of this article take effect.

(g) Notwithstanding the existence of any stage of an interim or final critical period adopted by the authority under this section, a person authorized to withdraw groundwater from the aquifer for irrigation purposes shall, without regard to the withdrawal reductions prescribed for that stage, be allowed to finish a crop already planted in the calendar year during which the critical period is in effect.

Sec. 1.26A. DEVELOPMENT OF WITHDRAWAL REDUCTION LEVELS AND STAGES FOR CRITICAL PERIOD MANAGEMENT THROUGH RECOVERY IMPLEMENTATION PROGRAM. (a) The authority, with the assistance of

Texas A&M University, shall cooperatively develop a recovery implementation program through a facilitated, consensus-based process that involves input from the United States Fish and Wildlife Service, other appropriate federal agencies, and all interested stakeholders, including those listed under Subsection (e)(1) of this section. The recovery implementation program shall be developed for the species that are:

(1) listed as threatened or endangered species under federal law; and

(2) associated with the aquifer.

(b) The authority shall enter into a memorandum of agreement with the United States Fish and Wildlife Service, other appropriate federal agencies, the Texas Commission on Environmental Quality, the Parks and Wildlife Department, the Department of Agriculture, the Texas Water Development Board, and other stakeholders, not later than December 31, 2007, in order to develop a program document that may be in the form of a habitat conservation plan used in issuance of an incidental take permit as outlined in Subsection (d) of this section.

(c) The authority shall enter into an implementing agreement with the United States Fish and Wildlife Service, other appropriate federal agencies, the Texas Commission on Environmental Quality, the Parks and Wildlife Department, the Department of Agriculture, the Texas Water Development Board, and other stakeholders to develop a program document that may be in the form of a habitat conservation plan used in issuance of an incidental take permit as outlined in Subsection (d) of this

section not later than December 31, 2009.

(d) The authority, the Texas Commission on Environmental Quality, the Parks and Wildlife Department, the Department of Agriculture, the Texas Water Development Board, and other stakeholders shall jointly prepare a program document that may be in the form of a habitat conservation plan used in issuance of an incidental take permit with the United States secretary of the interior, through the United States Fish and Wildlife Service and other appropriate federal agencies, under Section 4 or Section 6, Endangered Species Act of 1973 (16 U.S.C. Section 1533 or 1535), as applicable, based on the program developed under Subsection (a) of this section. The program document shall:

(1) provide recommendations for withdrawal adjustments based on a combination of spring discharge rates of the San Marcos and Comal Springs and levels at the J-17 and J-27 wells during critical periods to ensure that federally listed, threatened, and endangered species associated with the Edwards Aquifer will be protected at all times, including throughout a repeat of the drought of record;

(2) include provisions to pursue cooperative and grant funding to the extent available from all state, federal, and other sources for eligible programs included in the cooperative agreement under Subsection (c) of this section, including funding for a program director; and

(3) be approved and executed by the authority, the Texas Commission on Environmental Quality, the Parks and Wildlife Department, the Department of Agriculture, the Texas Water

Development Board, and the United States Fish and Wildlife Service not later than September 1, 2012, and the agreement shall take effect December 31, 2012.

(e) Texas A&M University shall assist in the creation of a steering committee to oversee and assist in the development of the cooperative agreement under Subsection (c) of this section. The steering committee must be created not later than September 30, 2007. The initial steering committee shall be composed of:

(1) a representative of each of the following entities, as appointed by the governing body of that entity:

(A) the Edwards Aquifer Authority;

(B) the Texas Commission on Environmental Quality;

(C) the Parks and Wildlife Department;

(D) the Department of Agriculture;

(E) the Texas Water Development Board;

(F) the San Antonio Water System;

(G) the Guadalupe-Blanco River Authority;

(H) the San Antonio River Authority;

(I) the South Central Texas Water Advisory Committee;

(J) Bexar County;

(K) CPS Energy; and

(L) Bexar Metropolitan Water District or its successor; and

(2) nine other persons who respectively must be:

(A) a representative of a holder of an initial

regular permit issued to a retail public utility located west of Bexar County, to be appointed by the authority;

(B) a representative of a holder of an initial regular permit issued by the authority for industrial purposes, to be appointed by the authority;

(C) a representative of a holder of an industrial surface water right in the Guadalupe River Basin, to be appointed by the Texas Commission on Environmental Quality;

(D) a representative of a holder of a municipal surface water right in the Guadalupe River Basin, to be appointed by the Texas Commission on Environmental Quality;

(E) a representative of a retail public utility in whose service area the Comal Springs or San Marcos Springs is located;

(F) a representative of a holder of an initial regular permit issued by the authority for irrigation, to be appointed by the commissioner of agriculture;

(G) a representative of an agricultural producer from the Edwards Aquifer region, to be appointed by the commissioner of agriculture;

(H) a representative of environmental interests from the Texas Living Waters Project, to be appointed by the governing body of that project; and

(I) a representative of recreational interests in the Guadalupe River Basin, to be appointed by the Parks and Wildlife Commission.

(f) The steering committee shall work with Texas A&M

University to:

(1) establish a regular meeting schedule and publish that schedule to encourage public participation; and

(2) not later than October 31, 2007, hire a program director to be housed at Texas A&M University.

(g) Texas A&M University may accept outside funding to pay the salary and expenses of the program director hired under this section and any expenses associated with the university's participation in the creation of the steering committee or subcommittees established by the steering committee.

(h) Where reasonably practicable or as required by law, any meeting of the steering committee, the Edwards Aquifer area expert science subcommittee, or another subcommittee established by the steering committee must be open to the public.

(i) The steering committee appointed under this section shall appoint an Edwards Aquifer area expert science subcommittee not later than December 31, 2007. The expert science subcommittee must be composed of an odd number of not fewer than seven or more than 15 members who have technical expertise regarding the Edwards Aquifer system, the threatened and endangered species that inhabit that system, springflows, or the development of withdrawal limitations. The Bureau of Economic Geology of The University of Texas at Austin and the River Systems Institute at Texas State University shall assist the expert science subcommittee. Chapter 2110, Government Code, does not apply to the size, composition, or duration of the expert science subcommittee.

(j) The Edwards Aquifer area expert science subcommittee

shall, among other things, analyze species requirements in relation to spring discharge rates and aquifer levels as a function of recharge and withdrawal levels. Based on that analysis and the elements required to be considered by the authority under Section 1.14 of this article, the expert science subcommittee shall, through a collaborative process designed to achieve consensus, develop recommendations for withdrawal reduction levels and stages for critical period management including, if appropriate, establishing separate and possibly different withdrawal reduction levels and stages for critical period management for different pools of the aquifer needed to maintain target spring discharge and aquifer levels. The expert science subcommittee shall submit its recommendations to the steering committee and all other stakeholders involved in the recovery implementation program under this section.

(k) The initial recommendations of the Edwards Aquifer area expert science subcommittee must be completed and submitted to the steering committee and other stakeholders not later than December 31, 2008, and should include an evaluation:

(1) of the option of designating a separate San Marcos pool, of how such a designation would affect existing pools, and of the need for an additional well to measure the San Marcos pool, if designated;

(2) of the necessity to maintain minimum springflows, including a specific review of the necessity to maintain a flow to protect the federally threatened and endangered species; and

(3) as to whether adjustments in the trigger levels

for the San Marcos Springs flow for the San Antonio pool should be made.

(l) In developing its recommendations, the Edwards Aquifer area expert science subcommittee shall:

(1) consider all reasonably available science, including any Edwards Aquifer-specific studies, and base its recommendations solely on the best science available; and

(2) operate on a consensus basis to the maximum extent possible.

(m) After development of the cooperative agreement, the steering committee, with the assistance of the Edwards Aquifer area expert science subcommittee and with input from the other recovery implementation program stakeholders, shall prepare and submit recommendations to the authority. The recommendations must:

(1) include a review of the critical period management plan, to occur at least once every five years;

(2) include specific monitoring, studies, and activities that take into account changed conditions and information that more accurately reflects the importance of critical period management; and

(3) establish a schedule for continuing the validation or refinement of the critical period management plan adopted by the authority and the strategies to achieve the program and cooperative agreement described by this section.

(n) In this subsection, "recharge facility" means a dam, reservoir, or other method of recharge project and associated facilities, structures, or works but does not include facilities

designed to recirculate water at Comal or San Marcos Springs. The steering committee shall establish a recharge facility feasibility subcommittee to:

(1) assess the need for the authority or any other entity to own, finance, design, construct, operate, or maintain recharge facilities;

(2) formulate plans to allow the authority or any other entity to own, finance, design, construct, operate, or maintain recharge facilities;

(3) make recommendations to the steering committee as to how to calculate the amount of additional water that is made available for use from a recharge project including during times of critical period reductions;

(4) maximize available federal funding for the authority or any other entity to own, finance, design, construct, operate, or maintain recharge facilities; and

(5) evaluate the financing of recharge facilities, including the use of management fees or special fees to be used for purchasing or operating the facilities.

(o) The steering committee may establish other subcommittees as necessary, including a hydrology subcommittee, a community outreach and education subcommittee, and a water supply subcommittee.

(p) On execution of the memorandum of agreement described by Subsection (b) of this section, the steering committee described by Subsection (e) of this section may, by majority vote of its members, vote to add members to the steering committee, change the makeup of

the committee, or dissolve the committee. If the steering committee is dissolved, the program director hired under Subsection (f) of this section shall assume the duties of the steering committee.

(g) The authority shall provide an annual report to the governor, lieutenant governor, and speaker of the house of representatives not later than January 1 of each year that details:

(1) the status of the recovery implementation program development process;

(2) the likelihood of completion of the recovery implementation program and the cooperative agreement described by Subsection (c) of this section;

(3) the extent to which the recommendations of the Edwards Aquifer area expert science subcommittee are being considered and implemented by the authority;

(4) any other actions that need to be taken in response to each recommendation;

(5) reasons explaining why any recommendation received has not been implemented; and

(6) any other issues the authority considers of value for the efficient and effective completion of the program and the cooperative agreement under this section.

SECTION 2.07. Sections 1.29(b), (h), and (i), Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993, are amended to read as follows:

(b) The authority shall assess equitable aquifer management fees based on aquifer use under the water management plan to finance

its administrative expenses and programs authorized under this article. Each water district governed by Chapter 36 [~~52~~], Water Code, that is within the authority's boundaries may contract with the authority to pay expenses of the authority through taxes in lieu of user fees to be paid by water users in the district. The contract must provide that the district will pay an amount equal to the amount that the water users in the district would have paid through user fees. The authority may not collect a total amount of fees and taxes that is more than is reasonably necessary for the administration of the authority.

(h) Fees assessed by the authority may not be used to fund the cost of reducing withdrawals or retiring permits or of judgments or claims related to withdrawals or permit retirements [~~Special fees collected under Subsection (c) or (d) of this section may not be used to finance a surface water supply reservoir project~~].

(i) The authority and other stakeholders, including state agencies, listed under Section 1.26A of this article shall provide money as necessary[~~, but not to exceed five percent of the money collected under Subsection (d) of this section,~~] to finance the activities of the steering committee and any subcommittees appointed by the steering committee and the program director of the recovery implementation program under Section 1.26A of this article. The authority shall provide, as necessary, up to $75,000 annually, adjusted for changes in the consumer price index, to finance the South Central Texas Water Advisory Committee's administrative expenses and programs authorized under this

article.

SECTION 2.08. Section 1.45(a), Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993, is amended to read as follows:

(a) The authority may own, finance, design, construct, [~~build or~~] operate, and maintain recharge dams and associated facilities, structures, or works in the contributing or recharge area of the aquifer if the recharge is made to increase the yield of the aquifer, [~~and~~] the recharge project does not impair senior water rights or vested riparian rights, and the recharge project is not designed to recirculate water at Comal or San Marcos Springs.

SECTION 2.09. Sections 1.14(b) and (d), Section 1.21, and Sections 1.29(a), (c), and (d), Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993, are repealed.

SECTION 2.10. (a) Before January 1, 2012, a suit may not be instituted in a state court contesting:

(1) the validity or implementation of this article; or

(2) the groundwater withdrawal amounts recognized in Section 2.02 of this Act.

(b) If applicable, a party that files a suit in any court shall be automatically removed from the steering committee established under Section 1.26A, Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993, as added by this article.

(c) A suit against the Edwards Aquifer Authority may not be instituted or maintained by a person who owns, holds, or uses a surface water right and claims injury or potential injury to that right for any reason, including any actions taken by the Edwards

Aquifer Authority to implement or enforce Article 1, Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993, as amended. This section does not apply to suits brought pursuant to Section 1.45, Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993.

SECTION 2.11. The change in law made by this article applies only to a cause of action filed on or after the effective date of this article. A cause of action that is filed before the effective date of this article is governed by the law in effect immediately before the effective date of this article, and that law is continued in effect for that purpose.

SECTION 2.12. This article takes effect immediately if this Act receives a vote of two-thirds of all the members elected to each house, as provided by Section 39, Article III, Texas Constitution. If this Act does not receive the vote necessary for immediate effect, this article takes effect September 1, 2007.

ARTICLE 3. EFFECTIVE DATE

SECTION 3.01. Except as otherwise provided by this Act, this Act takes effect September 1, 2007.

President of the Senate

Speaker of the House

I certify that H.B. No. 3 was passed by the House on March 1, 2007, by the following vote: Yeas 142, Nays 1, 1 present, not voting; that the House refused to concur in Senate amendments to H.B. No. 3 on May 25, 2007, and requested the appointment of a conference committee to consider the differences between the two houses; and that the House adopted the conference committee report on H.B. No. 3 on May 28, 2007, by the following vote: Yeas 142, Nays 2, 2 present, not voting.

Chief Clerk of the House

H.B. No. 3

I certify that H.B. No. 3 was passed by the Senate, with amendments, on May 23, 2007, by the following vote: Yeas 30, Nays 0; at the request of the House, the Senate appointed a conference committee to consider the differences between the two houses; and that the Senate adopted the conference committee report on H.B. No. 3 on May 28, 2007, by the following vote: Yeas 30, Nays 0.

_____

Secretary of the Senate

APPROVED: _____

Date

_____

Governor

AN ACT

relating to the development, management, and preservation of the water resources of the state; providing penalties.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF TEXAS:

ARTICLE 1. ENVIRONMENTAL FLOWS

SECTION 1.01. The heading to Section 5.506, Water Code, is amended to read as follows:

Sec. 5.506. EMERGENCY SUSPENSION OF PERMIT CONDITION RELATING TO, AND EMERGENCY AUTHORITY TO MAKE AVAILABLE WATER SET ASIDE FOR, BENEFICIAL INFLOWS TO AFFECTED BAYS AND ESTUARIES AND INSTREAM USES.

SECTION 1.02. Section 5.506, Water Code, is amended by adding Subsection (a-1) and amending Subsections (b) and (c) to read as follows:

(a-1) State water that is set aside by the commission to meet the needs for freshwater inflows to affected bays and estuaries and instream uses under Section 11.1471(a)(2) may be made available temporarily for other essential beneficial uses if the commission finds that an emergency exists that cannot practically be resolved in another way.

(b) The commission must give written notice of the proposed action [~~suspension~~] to the Parks and Wildlife Department before the commission suspends a permit condition under Subsection (a) or makes water available temporarily under Subsection (a-1) [~~this~~

~~section~~]. The commission shall give the Parks and Wildlife Department an opportunity to submit comments on the proposed action [~~suspension~~] for a period of 72 hours from receipt of the notice and must consider those comments before issuing an order implementing the proposed action [~~imposing the suspension~~].

(c) The commission may suspend a permit condition under Subsection (a) or make water available temporarily under Subsection (a-1) [~~this section~~] without notice except as required by Subsection (b).

SECTION 1.03. Subsection (j), Section 5.701, Water Code, is amended to read as follows:

(j) The fee for other uses of water not specifically named in this section is $1 per acre-foot, except that no political subdivision may be required to pay fees to use water for recharge of underground freshwater-bearing sands and aquifers or for abatement of natural pollution. A fee is not required for a water right that is [~~This fee is waived for applications for instream-use water rights~~] deposited into the Texas Water Trust.

SECTION 1.04. Section 11.002, Water Code, is amended by adding Subdivisions (15), (16), (17), (18), and (19) to read as follows:

(15) "Environmental flow analysis" means the application of a scientifically derived process for predicting the response of an ecosystem to changes in instream flows or freshwater inflows.

(16) "Environmental flow regime" means a schedule of flow quantities that reflects seasonal and yearly fluctuations that

typically would vary geographically, by specific location in a watershed, and that are shown to be adequate to support a sound ecological environment and to maintain the productivity, extent, and persistence of key aquatic habitats in and along the affected water bodies.

(17) "Environmental flow standards" means those requirements adopted by the commission under Section 11.1471.

(18) "Advisory group" means the environmental flows advisory group.

(19) "Science advisory committee" means the Texas environmental flows science advisory committee.

SECTION 1.05. Subsection (a), Section 11.023, Water Code, is amended to read as follows:

(a) To the extent that state water has not been set aside by the commission under Section 11.1471(a)(2) to meet downstream instream flow needs or freshwater inflow needs, state [~~State~~] water may be appropriated, stored, or diverted for:

(1) domestic and municipal uses, including water for sustaining human life and the life of domestic animals;

(2) agricultural uses and industrial uses, meaning processes designed to convert materials of a lower order of value into forms having greater usability and commercial value, including the development of power by means other than hydroelectric;

(3) mining and recovery of minerals;

(4) hydroelectric power;

(5) navigation;

(6) recreation and pleasure;

(7) public parks; and

(8) game preserves.

SECTION 1.06. Section 11.0235, Water Code, is amended by amending Subsections (b), (c), and (e) and adding Subsections (d-1) through (d-6) and (f) to read as follows:

(b) Maintaining the biological soundness of the state's rivers, lakes, bays, and estuaries is of great importance to the public's economic health and general well-being. The legislature encourages voluntary water and land stewardship to benefit the water in the state, as defined by Section 26.001.

(c) The legislature has expressly required the commission while balancing all other public interests to consider and, to the extent practicable, provide for the freshwater inflows and instream flows necessary to maintain the viability of the state's streams, rivers, and bay and estuary systems in the commission's regular granting of permits for the use of state waters. As an essential part of the state's environmental flows policy, all permit conditions relating to freshwater inflows to affected bays and estuaries and instream flow needs must be subject to temporary suspension if necessary for water to be applied to essential beneficial uses during emergencies.

(d-1) The legislature has determined that existing water rights that are amended to authorize use for environmental purposes should be enforced in a manner consistent with the enforcement of water rights for other purposes as provided by the laws of this state governing the appropriation of state water.

(d-2) The legislature finds that to provide certainty in

water management and development and to provide adequate protection of the state's streams, rivers, and bays and estuaries, the state must have a process with specific timelines for prompt action to address environmental flow issues in the state's major basin and bay systems, especially those systems in which unappropriated water is still available.

(d-3) The legislature finds that:

(1) in those basins in which water is available for appropriation, the commission should establish an environmental set-aside below which water should not be available for appropriation; and

(2) in those basins in which the unappropriated water that will be set aside for instream flow and freshwater inflow protection is not sufficient to fully satisfy the environmental flow standards established by the commission, a variety of market approaches, both public and private, for filling the gap must be explored and pursued.

(d-4) The legislature finds that while the state has pioneered tools to address freshwater inflow needs for bays and estuaries, there are limitations to those tools in light of both scientific and public policy evolution. To fully address bay and estuary environmental flow issues, the foundation of work accomplished by the state should be improved. While the state's instream flow studies program appears to encompass a comprehensive and scientific approach for establishing a process to assess instream flow needs for rivers and streams across the state, more extensive review and examination of the details of the program,

which may not be fully developed until the program is under way, are needed to ensure an effective tool for evaluating riverine environmental flow conditions.

(d-5) The legislature finds that the management of water to meet instream flow and freshwater inflow needs should be evaluated on a regular basis and adapted to reflect both improvements in science related to environmental flows and future changes in projected human needs for water. In addition, the development of management strategies for addressing environmental flow needs should be an ongoing, adaptive process that considers and addresses local issues.

(d-6) The legislature finds that recommendations for state action to protect instream flows and freshwater inflows should be developed through a consensus-based, regional approach involving balanced representation of stakeholders and that such a process should be encouraged throughout the state.

(e) The fact that greater pressures and demands are being placed on the water resources of the state makes it of paramount importance to ensure [~~reexamine the process for ensuring~~] that these important priorities are effectively addressed by detailing how environmental flow standards are to be developed using the environmental studies that have been and are to be performed by the state and others and specifying in clear delegations of authority how those environmental flow standards will be integrated into the regional water planning and water permitting process [~~to the commission~~].

(f) The legislature recognizes that effective

implementation of the approach provided by this chapter for protecting instream flows and freshwater inflows will require more effective water rights administration and enforcement systems than are currently available in most areas of the state.

SECTION 1.07. Subchapter B, Chapter 11, Water Code, is amended by adding Sections 11.0236, 11.02361, 11.02362, and 11.0237 to read as follows:

Sec. 11.0236. ENVIRONMENTAL FLOWS ADVISORY GROUP. (a) In recognition of the importance that the ecological soundness of our riverine, bay, and estuary systems and riparian lands has on the economy, health, and well-being of the state there is created the environmental flows advisory group.

(b) The advisory group is composed of nine members as follows:

(1) three members appointed by the governor;

(2) three members of the senate appointed by the lieutenant governor; and

(3) three members of the house of representatives appointed by the speaker of the house of representatives.

(c) Of the members appointed under Subsection (b)(1):

(1) one member must be a member of the commission;

(2) one member must be a member of the board; and

(3) one member must be a member of the Parks and Wildlife Commission.

(d) Each member of the advisory group serves at the will of the person who appointed the member.

(e) The appointed senator with the most seniority and the

appointed house member with the most seniority serve together as co-presiding officers of the advisory group.

(f) A member of the advisory group is not entitled to receive compensation for service on the advisory group but is entitled to reimbursement of the travel expenses incurred by the member while conducting the business of the advisory group, as provided by the General Appropriations Act.

(g) The advisory group may accept gifts and grants from any source to be used to carry out a function of the advisory group.

(h) The commission shall provide staff support for the advisory group.

(i) The advisory group shall conduct public hearings and study public policy implications for balancing the demands on the water resources of the state resulting from a growing population with the requirements of the riverine, bay, and estuary systems including granting permits for instream flows dedicated to environmental needs or bay and estuary inflows, use of the Texas Water Trust, and any other issues that the advisory group determines have importance and relevance to the protection of environmental flows. In evaluating the options for providing adequate environmental flows, the advisory group shall take notice of the strong public policy imperative that exists in this state recognizing that environmental flows are important to the biological health of our public and private lands, streams and rivers, and bay and estuary systems and are high priorities in the water management process. The advisory group shall specifically address:

(1) ways that the ecological soundness of those systems will be ensured in the water rights administration and enforcement and water allocation processes; and

(2) appropriate methods to encourage persons voluntarily to convert reasonable amounts of existing water rights to use for environmental flow protection temporarily or permanently.

(j) The advisory group may adopt rules, procedures, and policies as needed to administer this section, to implement its responsibilities, and to exercise its authority under Sections 11.02361 and 11.02362.

(k) Chapter 2110, Government Code, does not apply to the size, composition, or duration of the advisory group.

(l) Not later than December 1, 2008, and every two years thereafter, the advisory group shall issue and promptly deliver to the governor, lieutenant governor, and speaker of the house of representatives copies of a report summarizing:

(1) any hearings conducted by the advisory group;

(2) any studies conducted by the advisory group;

(3) any legislation proposed by the advisory group;

(4) progress made in implementing Sections 11.02361 and 11.02362; and

(5) any other findings and recommendations of the advisory group.

(m) The advisory group is abolished on the date that the commission has adopted environmental flow standards under Section 11.1471 for all of the river basin and bay systems in this state.

Sec. 11.02361. TEXAS ENVIRONMENTAL FLOWS SCIENCE ADVISORY COMMITTEE. (a) The Texas environmental flows science advisory committee consists of at least five but not more than nine members appointed by the advisory group.

(b) The advisory group shall appoint to the science advisory committee persons who will provide an objective perspective and diverse technical expertise, including expertise in hydrology, hydraulics, water resources, aquatic and terrestrial biology, geomorphology, geology, water quality, computer modeling, and other technical areas pertinent to the evaluation of environmental flows.

(c) Members of the science advisory committee serve five-year terms expiring March 1. A vacancy on the science advisory committee is filled by appointment by the co-presiding officers of the advisory group for the unexpired term.

(d) Chapter 2110, Government Code, does not apply to the size, composition, or duration of the science advisory committee.

(e) The science advisory committee shall:

(1) serve as an objective scientific body to advise and make recommendations to the advisory group on issues relating to the science of environmental flow protection; and

(2) develop recommendations to help provide overall direction, coordination, and consistency relating to:

(A) environmental flow methodologies for bay and estuary studies and instream flow studies;

(B) environmental flow programs at the commission, the Parks and Wildlife Department, and the board; and

(C) the work of the basin and bay expert science teams described in Section 11.02362.

(f) To assist the advisory group to assess the extent to which the recommendations of the science advisory committee are considered and implemented, the commission, the Parks and Wildlife Department, and the board shall provide written reports to the advisory group, at intervals determined by the advisory group, that describe:

(1) the actions taken by each agency in response to each recommendation; and

(2) for each recommendation not implemented, the reason it was not implemented.

(g) The science advisory committee is abolished on the date the advisory group is abolished under Section 11.0236(m).

Sec. 11.02362. DEVELOPMENT OF ENVIRONMENTAL FLOW REGIME RECOMMENDATIONS. (a) For the purposes of this section, the advisory group, not later than November 1, 2007, shall define the geographical extent of each river basin and bay system in this state for the sole purpose of developing environmental flow regime recommendations under this section and adoption of environmental flow standards under Section 11.1471.

(b) The advisory group shall give priority in descending order to the following river basin and bay systems of the state for the purpose of developing environmental flow regime recommendations and adopting environmental flow standards:

(1) the river basin and bay system consisting of the Trinity and San Jacinto Rivers and Galveston Bay and the river basin

and bay system consisting of the Sabine and Neches Rivers and Sabine Lake Bay;

(2) the river basin and bay system consisting of the Colorado and Lavaca Rivers and Matagorda and Lavaca Bays and the river basin and bay system consisting of the Guadalupe, San Antonio, Mission, and Aransas Rivers and Mission, Copano, Aransas, and San Antonio Bays; and

(3) the river basin and bay system consisting of the Nueces River and Corpus Christi and Baffin Bays, the river basin and bay system consisting of the Rio Grande, the Rio Grande estuary, and the Lower Laguna Madre, and the Brazos River and its associated bay and estuary system.

(c) For the river basin and bay systems listed in Subsection (b)(1):

(1) the advisory group shall appoint the basin and bay area stakeholders committee not later than November 1, 2007;

(2) the basin and bay area stakeholders committee shall establish a basin and bay expert science team not later than March 1, 2008;

(3) the basin and bay expert science team shall finalize environmental flow regime recommendations and submit them to the basin and bay area stakeholders committee, the advisory group, and the commission not later than March 1, 2009, except that at the request of the basin and bay area stakeholders committee for good cause shown, the advisory group may extend the deadline provided by this subdivision;

(4) the basin and bay area stakeholders committee

shall submit to the commission its comments on and recommendations regarding the basin and bay expert science team's recommended environmental flow regime not later than September 1, 2009; and

(5) the commission shall adopt the environmental flow standards as provided by Section 11.1471 not later than September 1, 2010.

(d) The advisory group shall appoint the basin and bay area stakeholders committees for the river basin and bay systems listed in Subsection (b)(2) not later than September 1, 2008, and shall appoint the basin and bay area stakeholders committees for the river basin and bay systems listed in Subsection (b)(3) not later than September 1, 2009. The advisory group shall establish a schedule for the performance of the tasks listed in Subsections (c)(2) through (5) with regard to the river basin and bay systems listed in Subsections (b)(2) and (3) that will result in the adoption of environmental flow standards for that river basin and bay system by the commission as soon as is reasonably possible. Each basin and bay area stakeholders committee and basin and bay expert science team for a river basin and bay system listed in Subsection (b)(2) or (3) shall make recommendations to the advisory group with regard to the schedule applicable to that river basin and bay system. The advisory group shall consider the recommendations of the basin and bay area stakeholders committee and basin and bay expert science team as well as coordinate with, and give appropriate consideration to the recommendations of, the commission, the Parks and Wildlife Department, and the board in establishing the schedule.

(e) For a river basin and bay system or a river basin that does not have an associated bay system in this state not listed in Subsection (b), the advisory group shall establish a schedule for the development of environmental flow regime recommendations and the adoption of environmental flow standards. The advisory group shall develop the schedule in consultation with the commission, the Parks and Wildlife Department, the board, and the pertinent basin and bay area stakeholders committee and basin and bay expert science team. The advisory group may, on its own initiative or on request, modify a schedule established under this subsection to be more responsive to particular circumstances, local desires, changing conditions, or time-sensitive conflicts. This subsection does not prohibit, in a river basin and bay system for which the advisory group has not yet established a schedule for the development of environmental flow regime recommendations and the adoption of environmental flow standards, an effort to develop information on environmental flow needs and ways in which those needs can be met by a voluntary consensus-building process.

(f) The advisory group shall appoint a basin and bay area stakeholders committee for each river basin and bay system in this state for which a schedule for the development of environmental flow regime recommendations and the adoption of environmental flow standards is specified by or established under Subsection (c), (d), or (e). Chapter 2110, Government Code, does not apply to the size, composition, or duration of a basin and bay area stakeholders committee. Each committee must consist of at least 17 members. The membership of each committee must:

(1) reflect a fair and equitable balance of interest groups concerned with the particular river basin and bay system for which the committee is established; and

(2) be representative of appropriate stakeholders, including the following if they have a presence in the particular river basin and bay system for which the committee is established:

(A) agricultural water users, including representatives of each of the following sectors:

(i) agricultural irrigation;

(ii) free-range livestock; and

(iii) concentrated animal feeding operation;

(B) recreational water users, including coastal recreational anglers and businesses supporting water recreation;

(C) municipalities;

(D) soil and water conservation districts;

(E) industrial water users, including representatives of each of the following sectors:

(i) refining;

(ii) chemical manufacturing;

(iii) electricity generation; and

(iv) production of paper products or timber;

(F) commercial fishermen;

(G) public interest groups;

(H) regional water planning groups;

(I) groundwater conservation districts;

(J) river authorities and other conservation and reclamation districts with jurisdiction over surface water; and

(K) environmental interests.

(g) Members of a basin and bay area stakeholders committee serve five-year terms expiring March 1. If a vacancy occurs on a committee, the remaining members of the committee by majority vote shall appoint a member to serve the remainder of the unexpired term.

(h) Meetings of a basin and bay area stakeholders committee must be open to the public.

(i) Each basin and bay area stakeholders committee shall establish a basin and bay expert science team for the river basin and bay system for which the committee is established. The basin and bay expert science team must be established not later than six months after the date the basin and bay area stakeholders committee is established. Chapter 2110, Government Code, does not apply to the size, composition, or duration of a basin and bay expert science team. Each basin and bay expert science team must be composed of technical experts with special expertise regarding the river basin and bay system or regarding the development of environmental flow regimes. A person may serve as a member of more than one basin and bay expert science team at the same time.

(j) The members of a basin and bay expert science team serve five-year terms expiring April 1. A vacancy on a basin and bay expert science team is filled by appointment by the pertinent basin and bay area stakeholders committee to serve the remainder of the unexpired term.

(k) The science advisory committee shall appoint one of its

members to serve as a liaison to each basin and bay expert science team to facilitate coordination and consistency in environmental flow activities throughout the state. The commission, the Parks and Wildlife Department, and the board shall provide technical assistance to each basin and bay expert science team, including information about the studies conducted under Sections 16.058 and 16.059, and may serve as nonvoting members of the basin and bay expert science team to facilitate the development of environmental flow regime recommendations.

(l) Where reasonably practicable, meetings of a basin and bay expert science team must be open to the public.

(m) Each basin and bay expert science team shall develop environmental flow analyses and a recommended environmental flow regime for the river basin and bay system for which the team is established through a collaborative process designed to achieve a consensus. In developing the analyses and recommendations, the science team must consider all reasonably available science, without regard to the need for the water for other uses, and the science team's recommendations must be based solely on the best science available. For the Rio Grande below Fort Quitman, any uses attributable to Mexican water flows must be excluded from environmental flow regime recommendations.

(n) Each basin and bay expert science team shall submit its environmental flow analyses and environmental flow regime recommendations to the pertinent basin and bay area stakeholders committee, the advisory group, and the commission in accordance with the applicable schedule specified by or established under

Subsection (c), (d), or (e). The basin and bay area stakeholders committee and the advisory group may not change the environmental flow analyses or environmental flow regime recommendations of the basin and bay expert science team.

(o) Each basin and bay area stakeholders committee shall review the environmental flow analyses and environmental flow regime recommendations submitted by the committee's basin and bay expert science team and shall consider them in conjunction with other factors, including the present and future needs for water for other uses related to water supply planning in the pertinent river basin and bay system. For the Rio Grande, the basin and bay area stakeholders committee shall also consider the water accounting requirements for any international water sharing treaty, minutes, and agreement applicable to the Rio Grande and the effects on allocation of water by the Rio Grande watermaster in the middle and lower Rio Grande. The Rio Grande basin and bay expert science team may not recommend any environmental flow regime that would result in a violation of a treaty or court decision. The basin and bay area stakeholders committee shall develop recommendations regarding environmental flow standards and strategies to meet the environmental flow standards and submit those recommendations to the commission and to the advisory group in accordance with the applicable schedule specified by or established under Subsection (c), (d), or (e). In developing its recommendations, the basin and bay area stakeholders committee shall operate on a consensus basis to the maximum extent possible.

(p) In recognition of the importance of adaptive

management, after submitting its recommendations regarding environmental flow standards and strategies to meet the environmental flow standards to the commission, each basin and bay area stakeholders committee, with the assistance of the pertinent basin and bay expert science team, shall prepare and submit for approval by the advisory group a work plan. The work plan must:

(1) establish a periodic review of the basin and bay environmental flow analyses and environmental flow regime recommendations, environmental flow standards, and strategies, to occur at least once every 10 years;

(2) prescribe specific monitoring, studies, and activities; and

(3) establish a schedule for continuing the validation or refinement of the basin and bay environmental flow analyses and environmental flow regime recommendations, the environmental flow standards adopted by the commission, and the strategies to achieve those standards.

(q) In accordance with the applicable schedule specified by or established under Subsection (c), (d), or (e), the advisory group, with input from the science advisory committee, shall review the environmental flow analyses and environmental flow regime recommendations submitted by each basin and bay expert science team. If appropriate, the advisory group shall submit comments on the analyses and recommendations to the commission for use by the commission in adopting rules under Section 11.1471. Comments must be submitted not later than six months after the date of receipt of the analyses and recommendations.

(r) Notwithstanding the other provisions of this section, in the event the commission, by permit or order, has established an estuary advisory council with specific duties related to implementation of permit conditions for environmental flows, that council may continue in full force and effect and shall act as and perform the duties of the basin and bay area stakeholders committee under this section. The estuary advisory council shall add members from stakeholder groups and from appropriate science and technical groups, if necessary, to fully meet the criteria for membership established in Subsection (f) and shall operate under the provisions of this section.

(s) Each basin and bay area stakeholders committee and basin and bay expert science team is abolished on the date the advisory group is abolished under Section 11.0236(m).

Sec. 11.0237. WATER RIGHTS FOR INSTREAM FLOWS DEDICATED TO ENVIRONMENTAL NEEDS OR BAY AND ESTUARY INFLOWS. (a) The commission may not issue a new permit for instream flows dedicated to environmental needs or bay and estuary inflows. The commission may approve an application to amend an existing permit or certificate of adjudication to change the use to or add a use for instream flows dedicated to environmental needs or bay and estuary inflows.

(b) This section does not alter the commission's obligations under Section 11.042(b) or (c), 11.046(b), 11.085(k)(2)(F), 11.134(b)(3)(D), 11.147, 11.1471, 11.1491, 11.150, 11.152, 16.058, or 16.059.

SECTION 1.08. Subsection (b), Section 11.082, Water Code,

is amended to read as follows:

(b) The state may recover the penalties prescribed in Subsection (a) [~~of this section~~] by suit brought for that purpose in a court of competent jurisdiction. The state may seek those penalties regardless of whether a watermaster has been appointed for the water division, river basin, or segment of a river basin where the unlawful use is alleged to have occurred.

SECTION 1.09. Section 11.0841, Water Code, is amended by adding Subsection (c) to read as follows:

(c) For purposes of this section, the Parks and Wildlife Department has:

(1) the rights of a holder of a water right that is held in the Texas Water Trust, including the right to file suit in a civil court to prevent the unlawful use of such a right;

(2) the right to act in the same manner that a holder of a water right may act to protect the holder's rights in seeking to prevent any person from appropriating water in violation of a set-aside established by the commission under Section 11.1471 to meet instream flow needs or freshwater inflow needs; and

(3) the right to file suit in a civil court to prevent the unlawful use of a set-aside established under Section 11.1471.

SECTION 1.10. Subsection (a), Section 11.0842, Water Code, is amended to read as follows:

(a) If a person violates this chapter, a rule or order adopted under this chapter or Section 16.236 [~~of this code~~], or a permit, certified filing, or certificate of adjudication issued under this chapter, the commission may assess an administrative

penalty against that person as provided by this section. The commission may assess an administrative penalty for a violation relating to a water division or a river basin or segment of a river basin regardless of whether a watermaster has been appointed for the water division or river basin or segment of the river basin.

SECTION 1.11. Subsection (a), Section 11.0843, Water Code, is amended to read as follows:

(a) Upon witnessing a violation of this chapter or a rule or order or a water right issued under this chapter, the executive director or a person designated by the executive director, including a watermaster or the watermaster's deputy, [~~as defined by commission rule,~~] may issue the alleged violator a field citation alleging that a violation has occurred and providing the alleged violator the option of either:

(1) without admitting to or denying the alleged violation, paying an administrative penalty in accordance with the predetermined penalty amount established under Subsection (b) [~~of this section~~] and taking remedial action as provided in the citation; or

(2) requesting a hearing on the alleged violation in accordance with Section 11.0842 [~~of this code~~].

SECTION 1.12. Subsection (b), Section 11.134, Water Code, is amended to read as follows:

(b) The commission shall grant the application only if:

(1) the application conforms to the requirements prescribed by this chapter and is accompanied by the prescribed fee;

(2) unappropriated water is available in the source of supply;

(3) the proposed appropriation:

(A) is intended for a beneficial use;

(B) does not impair existing water rights or vested riparian rights;

(C) is not detrimental to the public welfare;

(D) considers any applicable environmental flow standards established under Section 11.1471 and, if applicable, the assessments performed under Sections 11.147(d) and (e) and Sections 11.150, 11.151, and 11.152; and

(E) addresses a water supply need in a manner that is consistent with the state water plan and the relevant approved regional water plan for any area in which the proposed appropriation is located, unless the commission determines that conditions warrant waiver of this requirement; and

(4) the applicant has provided evidence that reasonable diligence will be used to avoid waste and achieve water conservation as defined by [~~Subdivision (8)(B),~~] Section 11.002(8)(B) [~~11.002~~].

SECTION 1.13. Section 11.147, Water Code, is amended by amending Subsections (b), (d), and (e) and adding Subsections (e-1), (e-2), and (e-3) to read as follows:

(b) In its consideration of an application for a permit to store, take, or divert water, the commission shall assess the effects, if any, of the issuance of the permit on the bays and estuaries of Texas. For permits issued within an area that is 200

river miles of the coast, to commence from the mouth of the river thence inland, the commission shall include in the permit any conditions considered necessary to maintain beneficial inflows to any affected bay and estuary system, to the extent practicable when considering all public interests and the studies mandated by Section 16.058 as evaluated under Section 11.1491[~~, those conditions considered necessary to maintain beneficial inflows to any affected bay and estuary system~~].

(d) In its consideration of an application to store, take, or divert water, the commission shall include in the permit, to the extent practicable when considering all public interests, those conditions considered by the commission necessary to maintain existing instream uses and water quality of the stream or river to which the application applies. In determining what conditions to include in the permit under this subsection, the commission shall consider among other factors:

(1) the studies mandated by Section 16.059; and

(2) any water quality assessment performed under Section 11.150.

(e) The commission shall include in the permit, to the extent practicable when considering all public interests, those conditions considered by the commission necessary to maintain fish and wildlife habitats. In determining what conditions to include in the permit under this subsection, the commission shall consider any assessment performed under Section 11.152.

(e-1) Any permit for a new appropriation of water or an amendment to an existing water right that increases the amount of

water authorized to be stored, taken, or diverted must include a provision allowing the commission to adjust the conditions included in the permit or amended water right to provide for protection of instream flows or freshwater inflows. With respect to an amended water right, the provision may not allow the commission to adjust a condition of the amendment other than a condition that applies only to the increase in the amount of water to be stored, taken, or diverted authorized by the amendment. This subsection does not affect an appropriation of or an authorization to store, take, or divert water under a permit or amendment to a water right issued before September 1, 2007. The commission shall adjust the conditions if the commission determines, through an expedited public comment process, that such an adjustment is appropriate to achieve compliance with applicable environmental flow standards adopted under Section 11.1471. The adjustment:

(1) in combination with any previous adjustments made under this subsection may not increase the amount of the pass-through or release requirement for the protection of instream flows or freshwater inflows by more than 12.5 percent of the annualized total of that requirement contained in the permit as issued or of that requirement contained in the amended water right and applicable only to the increase in the amount of water authorized to be stored, taken, or diverted under the amended water right;

(2) must be based on appropriate consideration of the priority dates and diversion locations of any other water rights granted in the same river basin that are subject to adjustment under

this subsection; and

(3) must be based on appropriate consideration of any voluntary contributions to the Texas Water Trust, and of any voluntary amendments to existing water rights to change the use of a specified quantity of water to or add a use of a specified quantity of water for instream flows dedicated to environmental needs or bay and estuary inflows as authorized by Section 11.0237(a), that actually contribute toward meeting the applicable environmental flow standards.

(e-2) Any water right holder who makes a contribution or amends a water right as described by Subsection (e-1)(3) is entitled to appropriate credit for the benefits of the contribution or amendment against the adjustment of the holder's water right under Subsection (e-1).

(e-3) Notwithstanding Subsections (b)-(e), for the purpose of determining the environmental flow conditions necessary to maintain freshwater inflows to an affected bay and estuary system, existing instream uses and water quality of a stream or river, or fish and aquatic wildlife habitats, the commission shall apply any applicable environmental flow standard, including any environmental flow set-aside, adopted under Section 11.1471 instead of considering the factors specified by those subsections.

SECTION 1.14. Subchapter D, Chapter 11, Water Code, is amended by adding Section 11.1471 to read as follows:

Sec. 11.1471. ENVIRONMENTAL FLOW STANDARDS AND SET-ASIDES. (a) The commission by rule shall:

(1) adopt appropriate environmental flow standards

for each river basin and bay system in this state that are adequate to support a sound ecological environment, to the maximum extent reasonable considering other public interests and other relevant factors;

(2) establish an amount of unappropriated water, if available, to be set aside to satisfy the environmental flow standards to the maximum extent reasonable when considering human water needs; and

(3) establish procedures for implementing an adjustment of the conditions included in a permit or an amended water right as provided by Sections 11.147(e-1) and (e-2).

(b) In adopting environmental flow standards for a river basin and bay system under Subsection (a)(1), the commission shall consider:

(1) the definition of the geographical extent of the river basin and bay system adopted by the advisory group under Section 11.02362(a) and the definition and designation of the river basin by the board under Section 16.051(c);

(2) the schedule established by the advisory group under Section 11.02362(d) or (e) for the adoption of environmental flow standards for the river basin and bay system, if applicable;

(3) the environmental flow analyses and the recommended environmental flow regime developed by the applicable basin and bay expert science team under Section 11.02362(m);

(4) the recommendations developed by the applicable basin and bay area stakeholders committee under Section 11.02362(o) regarding environmental flow standards and strategies to meet the

flow standards;

(5) any comments submitted by the advisory group to the commission under Section 11.02362(q);

(6) the specific characteristics of the river basin and bay system;

(7) economic factors;

(8) the human and other competing water needs in the river basin and bay system;

(9) all reasonably available scientific information, including any scientific information provided by the science advisory committee; and

(10) any other appropriate information.

(c) Environmental flow standards adopted under Subsection (a)(1) must consist of a schedule of flow quantities, reflecting seasonal and yearly fluctuations that may vary geographically by specific location in a river basin and bay system.

(d) As provided by Section 11.023, the commission may not issue a permit for a new appropriation or an amendment to an existing water right that increases the amount of water authorized to be stored, taken, or diverted if the issuance of the permit or amendment would impair an environmental flow set-aside established under Subsection (a)(2). A permit for a new appropriation or an amendment to an existing water right that increases the amount of water authorized to be stored, taken, or diverted that is issued after the adoption of an applicable environmental flow set-aside must contain appropriate conditions to ensure protection of the environmental flow set-aside.

(e) An environmental flow set-aside established under Subsection (a)(2) for a river basin and bay system other than the middle and lower Rio Grande must be assigned a priority date corresponding to the date the commission receives environmental flow regime recommendations from the applicable basin and bay expert science team and be included in the appropriate water availability models in connection with an application for a permit for a new appropriation or for an amendment to an existing water right that increases the amount of water authorized to be stored, taken, or diverted.

(f) An environmental flow standard or environmental flow set-aside adopted under Subsection (a) may be altered by the commission in a rulemaking process undertaken in accordance with a schedule established by the commission. In establishing a schedule, the commission shall consider the applicable work plan approved by the advisory group under Section 11.02362(p). The commission's schedule may not provide for the rulemaking process to occur more frequently than once every 10 years unless the work plan provides for a periodic review under Section 11.02362(p) to occur more frequently than once every 10 years. In that event, the commission may provide for the rulemaking process to be undertaken in conjunction with the periodic review if the commission determines that schedule to be appropriate. A rulemaking process undertaken under this subsection must provide for the participation of stakeholders having interests in the particular river basin and bay system for which the process is undertaken.

SECTION 1.15. The heading to Section 11.148, Water Code, is

amended to read as follows:

Sec. 11.148. EMERGENCY SUSPENSION OF PERMIT CONDITIONS AND EMERGENCY AUTHORITY TO MAKE AVAILABLE WATER SET ASIDE FOR ENVIRONMENTAL FLOWS.

SECTION 1.16. Section 11.148, Water Code, is amended by adding Subsection (a-1) and amending Subsections (b) and (c) to read as follows:

(a-1) State water that is set aside by the commission to meet the needs for freshwater inflows to affected bays and estuaries and instream uses under Section 11.1471(a)(2) may be made available temporarily for other essential beneficial uses if the commission finds that an emergency exists that cannot practically be resolved in another way.

(b) Before the commission suspends a permit condition under Subsection (a) or makes water available temporarily under Subsection (a-1) [~~of this section~~], it must give written notice to the Parks and Wildlife Department of the proposed action [~~suspension~~]. The commission shall give the Parks and Wildlife Department an opportunity to submit comments on the proposed action [~~suspension~~] within 72 hours from such time and the commission shall consider those comments before issuing its order implementing the proposed action [~~imposing the suspension~~].

(c) The commission may suspend the permit condition under Subsection (a) or make water available temporarily under Subsection (a-1) without notice to any other interested party other than the Parks and Wildlife Department as provided by Subsection (b) [~~of this section~~]. However, all affected persons shall be notified

immediately by publication, and a hearing to determine whether the suspension should be continued shall be held within 15 days of the date on which the order to suspend is issued.

SECTION 1.17. Subsection (a), Section 11.1491, Water Code, is amended to read as follows:

(a) The Parks and Wildlife Department and the commission shall have joint responsibility to review the studies prepared under Section 16.058 [~~of this code~~], to determine inflow conditions necessary for the bays and estuaries, and to provide information necessary for water resources management. Each agency shall designate an employee to share equally in the oversight of the program. Other responsibilities shall be divided between the Parks and Wildlife Department and the commission to maximize present in-house capabilities of personnel and to minimize costs to the state. Each agency shall have reasonable access to all information produced by the other agency. Publication of reports completed under this section shall be submitted for comment to [~~both~~] the commission, [~~and~~] the Parks and Wildlife Department, the advisory group, the science advisory committee, and any applicable basin and bay area stakeholders committee and basin and bay expert science team.

SECTION 1.18. Subsection (g), Section 11.329, Water Code, is amended to read as follows:

(g) The commission may not assess costs under this section against a holder of a non-priority hydroelectric right that owns or operates privately owned facilities that collectively have a capacity of less than two megawatts or against a holder of a water

right placed in the Texas Water Trust for a term of at least 20 years. [~~This subsection is not intended to affect in any way the fees assessed on a water right holder by the commission under Section 1.29(d), Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993. For purposes of Section 1.29(d), Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993, a holder of a non-priority hydroelectric right that owns or operates privately owned facilities that collectively have a capacity of less than two megawatts shall be assessed fees at the same rate per acre-foot charged to a holder of a non-priority hydroelectric right that owns or operates privately owned facilities that collectively have a capacity of more than two megawatts.~~]

SECTION 1.19. Subsection (e), Section 11.404, Water Code, is amended to read as follows:

(e) The court may not assess costs and expenses under this section against:

(1) a holder of a non-priority hydroelectric right that owns or operates privately owned facilities that collectively have a capacity of less than two megawatts; or

(2) a holder of a water right placed in the Texas Water Trust for a term of at least 20 years.

SECTION 1.20. Subchapter I, Chapter 11, Water Code, is amended by adding Section 11.4531 to read as follows:

Sec. 11.4531. WATERMASTER ADVISORY COMMITTEE. (a) For each river basin or segment of a river basin for which the executive director appoints a watermaster under this subchapter, the executive director shall appoint a watermaster advisory committee

consisting of at least nine but not more than 15 members. A member of the advisory committee must be a holder of a water right or a representative of a holder of a water right in the river basin or segment of the river basin for which the watermaster is appointed. In appointing members to the advisory committee, the executive director shall consider:

(1) geographic representation;

(2) amount of water rights held;

(3) different types of holders of water rights and users, including water districts, municipal suppliers, irrigators, and industrial users; and

(4) experience and knowledge of water management practices.

(b) An advisory committee member is not entitled to reimbursement of expenses or to compensation.

(c) An advisory committee member serves a two-year term expiring August 31 of each odd-numbered year and holds office until a successor is appointed.

(d) The advisory committee shall meet within 30 days after the date the initial appointments have been made and shall select a presiding officer to serve a one-year term. The committee shall meet regularly as necessary.

(e) The advisory committee shall:

(1) make recommendations to the executive director regarding activities of benefit to the holders of water rights in the administration and distribution of water to holders of water rights in the river basin or segment of the river basin for which

the watermaster is appointed;

(2) review and comment to the executive director on the annual budget of the watermaster operation; and

(3) perform other advisory duties as requested by the executive director regarding the watermaster operation or as requested by holders of water rights and considered by the committee to benefit the administration of water rights in the river basin or segment of the river basin for which the watermaster is appointed.

SECTION 1.21. Sections 11.454 and 11.455, Water Code, are amended to read as follows:

Sec. 11.454. DUTIES AND AUTHORITY OF THE WATERMASTER. Section 11.327 applies to the duties and authority of a watermaster appointed for a river basin or segment of a river basin under this subchapter in the same manner as that section applies to the duties and authority of a watermaster appointed for a water division under Subchapter G [~~A watermaster as the agent of the commission and under the executive director's supervision shall:~~

[~~(1) divide the water of the streams or other sources of supply of his segment or basin in accordance with the authorized water rights;~~

[~~(2) regulate or cause to be regulated the controlling works of reservoirs and diversion works in time of water shortage, as is necessary because of the rights existing in the streams of his segment or basin, or as is necessary to prevent the waste of water or its diversion, taking, storage, or use in excess of the quantities to which the holders of water rights are lawfully~~

~~entitled; and~~

[~~(3) perform any other duties and exercise any authority directed by the commission~~].

Sec. 11.455. COMPENSATION AND EXPENSES OF WATERMASTER [~~ASSESSMENTS~~]. (a) Section 11.329 applies to the payment of the compensation and expenses of a watermaster appointed for a river basin or segment of a river basin under this subchapter in the same manner as that section applies to the payment of the compensation and expenses of a watermaster appointed for a water division under Subchapter G.

(b) The executive director shall deposit the assessments collected under this section to the credit of the watermaster fund.

(c) Money deposited under this section to the credit of the watermaster fund may be used only for the purposes specified by Section 11.3291 with regard to the watermaster operation under this subchapter with regard to which the assessments were collected [~~The commission may assess the costs of the watermaster against all persons who hold water rights in the river basin or segment of the river basin under the watermaster's jurisdiction in accordance with Section 11.329 of this code~~].

SECTION 1.22. Subchapter F, Chapter 15, Water Code, is amended by adding Section 15.4063 to read as follows:

Sec. 15.4063. ENVIRONMENTAL FLOWS FUNDING. The board may authorize the use of money in the research and planning fund:

(1) to compensate the members of the Texas environmental flows science advisory committee established under Section 11.02361 for attendance and participation at meetings of

the committee and for transportation, meals, lodging, or other travel expenses associated with attendance at those meetings as provided by the General Appropriations Act;

(2) for contracts with cooperating state and federal agencies and universities and with private entities as necessary to provide technical assistance to enable the Texas environmental flows science advisory committee and the basin and bay expert science teams established under Section 11.02362 to perform their statutory duties;

(3) to compensate the members of the basin and bay expert science teams established under Section 11.02362 for attendance and participation at meetings of the basin and bay expert science teams and for transportation, meals, lodging, or other travel expenses associated with attendance at those meetings as provided by the General Appropriations Act; and

(4) for contracts with political subdivisions designated as representatives of basin and bay area stakeholders committees established under Section 11.02362 to fund all or part of the administrative expenses incurred in conducting meetings of the basin and bay area stakeholders committees or the pertinent basin and bay expert science teams.

SECTION 1.23. Subsection (d), Section 16.059, Water Code, is amended to read as follows:

(d) The priority studies shall be completed not later than December 31, 2016 [~~2010~~]. The Parks and Wildlife Department, the commission, and the board shall establish a work plan that prioritizes the studies and that sets interim deadlines providing

for publication of flow determinations for individual rivers and streams on a reasonably consistent basis throughout the prescribed study period. Before publication, completed studies shall be submitted for comment to the commission, the board, and the Parks and Wildlife Department.

SECTION 1.24. Subsection (h), Section 26.0135, Water Code, as amended by Chapters 234 and 965, Acts of the 77th Legislature, Regular Session, 2001, is reenacted and amended to read as follows:

(h) The commission shall apportion, assess, and recover the reasonable costs of administering the water quality management programs under this section from users of water and wastewater permit holders in the watershed according to the records of the commission generally in proportion to their right, through permit or contract, to use water from and discharge wastewater in the watershed. Irrigation water rights, [~~and~~] non-priority hydroelectric rights of a water right holder that owns or operates privately owned facilities that collectively have a capacity of less than two megawatts, and water rights held in the Texas Water Trust for terms of at least 20 years will not be subject to this assessment. The cost to river authorities and others to conduct water quality monitoring and assessment shall be subject to prior review and approval by the commission as to methods of allocation and total amount to be recovered. The commission shall adopt rules to supervise and implement the water quality monitoring, assessment, and associated costs. The rules shall ensure that water users and wastewater dischargers do not pay excessive amounts, that program funds are equitably apportioned among basins,

that a river authority may recover no more than the actual costs of administering the water quality management programs called for in this section, and that no municipality shall be assessed cost for any efforts that duplicate water quality management activities described in Section 26.177 [~~of this chapter~~]. The rules concerning the apportionment and assessment of reasonable costs shall provide for a recovery of not more than $5,000,000 annually. Costs recovered by the commission are to be deposited to the credit of the water resource management account and may be used only to accomplish the purposes of this section. The commission may apply not more than 10 percent of the costs recovered annually toward the commission's overhead costs for the administration of this section and the implementation of regional water quality assessments. The commission, with the assistance and input of each river authority, shall file a written report accounting for the costs recovered under this section with the governor, the lieutenant governor, and the speaker of the house of representatives on or before December 1 of each even-numbered year.

SECTION 1.25. Subsection (b), Section 11.1491, Water Code, is repealed.

SECTION 1.26. (a) The governor, lieutenant governor, and speaker of the house of representatives shall appoint the initial members of the environmental flows advisory group as provided by Section 11.0236, Water Code, as added by this article, as soon as practicable on or after the effective date of this Act.

(b) As soon as practicable after taking office, the initial members of the environmental flows advisory group shall appoint the

initial members of the Texas environmental flows science advisory committee as provided by Section 11.02361, Water Code, as added by this article. The terms of the initial members of the committee expire March 1, 2012.

(c) The environmental flows advisory group shall appoint the members of each basin and bay area stakeholders committee as provided by Section 11.02362, Water Code, as added by this article. The terms of the initial members of each committee expire March 1 of the fifth year that begins after the year in which the initial appointments are made.

(d) Each basin and bay area stakeholders committee shall appoint the members of the basin and bay expert science team for the river basin and bay system for which the committee is established as provided by Section 11.02362, Water Code, as added by this article. The terms of the initial members of each team expire April 1 of the fifth year that begins after the year in which the initial appointments are made.

(e) The executive director of the Texas Commission on Environmental Quality shall appoint the members of the watermaster advisory committee under Section 11.4531, Water Code, as added by this article, for each river basin or segment of a river basin for which the executive director appoints a watermaster under Subchapter I, Chapter 11, Water Code. The terms of the initial members of each committee expire August 31 of the first odd-numbered year that begins after the year in which the initial appointments are made.

SECTION 1.27. The changes in law made by this article

relating to a permit for a new appropriation of water or to an amendment to an existing water right that increases the amount of water authorized to be stored, taken, or diverted apply only to:

(1) water appropriated under a permit for a new appropriation of water the application for which is pending with the Texas Commission on Environmental Quality on the effective date of this Act or is filed with the commission on or after that date; or

(2) the increase in the amount of water authorized to be stored, taken, or diverted under an amendment to an existing water right that increases the amount of water authorized to be stored, taken, or diverted and the application for which is pending with the Texas Commission on Environmental Quality on the effective date of this Act or is filed with the commission on or after that date.

ARTICLE 2. WATER CONSERVATION AND PLANNING AND OTHER WATER-RELATED PROVISIONS

SECTION 2.01. Section 1.003, Water Code, is amended to read as follows:

Sec. 1.003. PUBLIC POLICY. It is the public policy of the state to provide for the conservation and development of the state's natural resources, including:

(1) the control, storage, preservation, and distribution of the state's storm and floodwaters and the waters of its rivers and streams for irrigation, power, and other useful purposes;

(2) the reclamation and irrigation of the state's arid, semiarid, and other land needing irrigation;

(3) the reclamation and drainage of the state's overflowed land and other land needing drainage;

(4) the conservation and development of its forest, water, and hydroelectric power;

(5) the navigation of the state's inland and coastal waters; [~~and~~]

(6) the maintenance of a proper ecological environment of the bays and estuaries of Texas and the health of related living marine resources; and

(7) the voluntary stewardship of public and private lands to benefit waters of the state.

SECTION 2.02. Subchapter A, Chapter 1, Water Code, is amended by adding Section 1.004 to read as follows:

Sec. 1.004. FINDINGS AND POLICY REGARDING LAND STEWARDSHIP. (a) The legislature finds that voluntary land stewardship enhances the efficiency and effectiveness of this state's watersheds by helping to increase surface water and groundwater supplies, resulting in a benefit to the natural resources of this state and to the general public. It is therefore the policy of this state to encourage voluntary land stewardship as a significant water management tool.

(b) "Land stewardship," as used in this code, is the voluntary practice of managing land to conserve or enhance suitable landscapes and the ecosystem values of the land. Land stewardship includes land and habitat management, wildlife conservation, and watershed protection. Land stewardship practices include runoff reduction, prescribed burning, managed grazing, brush management,

erosion management, reseeding with native plant species, riparian management and restoration, and spring and creek-bank protection, all of which benefit the water resources of this state.

SECTION 2.03. Subtitle A, Title 2, Water Code, is amended by adding Chapter 10 to read as follows:

CHAPTER 10. WATER CONSERVATION ADVISORY COUNCIL

Sec. 10.001. DEFINITIONS. In this chapter:

(1) "Best management practices" has the meaning assigned by Section 11.002.

(2) "Board" means the Texas Water Development Board.

(3) "Commission" means the Texas Commission on Environmental Quality.

(4) "Council" means the Water Conservation Advisory Council.

Sec. 10.002. PURPOSE. The council is created to provide the governor, lieutenant governor, speaker of the house of representatives, legislature, board, commission, political subdivisions, and public with the resource of a select council with expertise in water conservation.

Sec. 10.003. CREATION AND MEMBERSHIP. (a) The council is composed of 23 members appointed by the board. The board shall appoint one member to represent each of the following entities or interest groups:

(1) Texas Commission on Environmental Quality;

(2) Department of Agriculture;

(3) Parks and Wildlife Department;

(4) State Soil and Water Conservation Board;

(5) Texas Water Development Board;

(6) regional water planning groups;

(7) federal agencies;

(8) municipalities;

(9) groundwater conservation districts;

(10) river authorities;

(11) environmental groups;

(12) irrigation districts;

(13) institutional water users;

(14) professional organizations focused on water conservation;

(15) higher education;

(16) agricultural groups;

(17) refining and chemical manufacturing;

(18) electric generation;

(19) mining and recovery of minerals;

(20) landscape irrigation and horticulture;

(21) water control and improvement districts;

(22) rural water users; and

(23) municipal utility districts.

(b) Each entity or interest group described by Subsection (a) may recommend one or more persons to fill the position on the council held by the member who represents that entity or interest group. If one or more persons are recommended for a position on the council, the board shall appoint one of the persons recommended to fill the position.

Sec. 10.004. TERMS. (a) Members of the council serve

staggered terms of six years, with seven or eight members' terms, as applicable, expiring August 31 of each odd-numbered year.

(b) The board shall fill a vacancy on the council for the unexpired term by appointing a person who has the same qualifications as required under Section 10.003 for the person who previously held the vacated position.

Sec. 10.005. PRESIDING OFFICER. The council members shall select one member as the presiding officer of the council to serve in that capacity until the person's term as a council member expires.

Sec. 10.006. COUNCIL STAFF. On request by the council, the board shall provide any necessary staff to assist the council in the performance of its duties.

Sec. 10.007. PUBLIC MEETINGS AND PUBLIC INFORMATION. (a) The council may hold public meetings as needed to fulfill its duties under this chapter.

(b) The council is subject to Chapters 551 and 552, Government Code.

Sec. 10.008. INAPPLICABILITY OF ADVISORY COMMITTEE LAW. Chapter 2110, Government Code, does not apply to the size, composition, or duration of the council.

Sec. 10.009. COMPENSATION OF MEMBERS. (a) Members of the council serve without compensation but may be reimbursed by legislative appropriation for actual and necessary expenses related to the performance of council duties.

(b) Reimbursement under Subsection (a) is subject to the approval of the presiding officer of the council.

Sec. 10.010. POWERS AND DUTIES OF COUNCIL. The council shall:

(1) monitor trends in water conservation implementation;

(2) monitor new technologies for possible inclusion by the board as best management practices in the best management practices guide developed by the water conservation implementation task force under Chapter 109, Acts of the 78th Legislature, Regular Session, 2003;

(3) monitor the effectiveness of the statewide water conservation public awareness program developed under Section 16.401 and associated local involvement in implementation of the program;

(4) develop and implement a state water management resource library;

(5) develop and implement a public recognition program for water conservation;

(6) monitor the implementation of water conservation strategies by water users included in regional water plans; and

(7) monitor target and goal guidelines for water conservation to be considered by the board and commission.

Sec. 10.011. REPORT. Not later than December 1 of each even-numbered year, the council shall submit to the governor, lieutenant governor, and speaker of the house of representatives a report on progress made in water conservation in this state.

Sec. 10.012. DESIGNATION OF CERTIFIED WATER CONSERVATION TRAINING FACILITIES STUDY. (a) The council shall conduct a study

to evaluate the desirability of requiring the board to:

(1) designate as certified water conservation training facilities entities and programs that provide assistance to retail public utilities in developing water conservation plans under Section 13.146; and

(2) give preference to certified water conservation training facilities in making loans or grants for water conservation training and education activities.

(b) Not later than December 1, 2008, the council shall submit a written report containing the findings of the study and the recommendations of the council to the governor, lieutenant governor, and speaker of the house of representatives.

(c) This section expires June 1, 2009.

SECTION 2.04. Section 11.002, Water Code, is amended by adding Subdivision (20) to read as follows:

(20) "Best management practices" means those voluntary efficiency measures developed by the commission and the board that save a quantifiable amount of water, either directly or indirectly, and that can be implemented within a specified time frame.

SECTION 2.05. Subdivisions (1-a), (5), and (8), Section 13.002, Water Code, are amended to read as follows:

(1-a) "Landowner," "owner of a tract of land," and "owners of each tract of land" include multiple owners of a single deeded tract of land as shown on the appraisal roll of the appraisal district established for each county in which the property is located.

(5) "Commission" means the Texas [~~Natural Resource Conservation~~] Commission on Environmental Quality.

(8) "Executive director" means the executive director of the commission [~~Texas Natural Resource Conservation Commission~~].

SECTION 2.06. Subchapter E, Chapter 13, Water Code, is amended by adding Sections 13.146 and 13.147 to read as follows:

Sec. 13.146. WATER CONSERVATION PLAN. The commission shall require a retail public utility that provides potable water service to 3,300 or more connections to submit to the executive administrator of the board a water conservation plan based on specific targets and goals developed by the retail public utility and using appropriate best management practices, as defined by Section 11.002, or other water conservation strategies.

Sec. 13.147. CONSOLIDATED BILLING AND COLLECTION CONTRACTS. (a) A retail public utility providing water service may contract with a retail public utility providing sewer service to bill and collect the sewer service provider's fees and payments as part of a consolidated process with the billing and collection of the water service provider's fees and payments. The water service provider may provide that service only for customers who are served by both providers in an area covered by both providers' certificates of public convenience and necessity. If the water service provider refuses to enter into a contract under this section or if the water service provider and sewer service provider cannot agree on the terms of a contract, the sewer service provider may petition the commission to issue an order requiring the water

service provider to provide that service.

(b) A contract or order under this section must provide procedures and deadlines for submitting billing and customer information to the water service provider and for the delivery of collected fees and payments to the sewer service provider.

(c) A contract or order under this section may require or permit a water service provider that provides consolidated billing and collection of fees and payments to:

(1) terminate the water services of a person whose sewage services account is in arrears for nonpayment; and

(2) charge a customer a reconnection fee if the customer's water service is terminated for nonpayment of the customer's sewage services account.

(d) A water service provider that provides consolidated billing and collection of fees and payments may impose on each sewer service provider customer a reasonable fee to recover costs associated with providing consolidated billing and collection of fees and payments for sewage services.

SECTION 2.07. Subchapter F, Chapter 13, Water Code, is amended by adding Section 13.188 to read as follows:

Sec. 13.188. ADJUSTMENT FOR CHANGE IN ENERGY COSTS. (a) Notwithstanding any other provision in this chapter, the commission by rule shall adopt a procedure allowing a utility to file with the commission an application to timely adjust the utility's rates to reflect an increase or decrease in documented energy costs in a pass through clause. The commission, by rule, shall require the pass through of documented decreases in energy

costs within a reasonable time. The pass through, whether a decrease or increase, shall be implemented on no later than an annual basis, unless the commission determines a special circumstance applies.

(b) Notwithstanding any other provision to the contrary, this adjustment is an uncontested matter not subject to a contested case hearing. However, the executive director shall hold an uncontested public meeting:

(1) on the request of a member of the legislature who represents the area served by the water and sewer utility; or

(2) if the executive director determines that there is substantial public interest in the matter.

(c) A proceeding under this section is not a rate case and Section 13.187 does not apply.

SECTION 2.08. Section 13.2451, Water Code, is amended to read as follows:

Sec. 13.2451. EXTENSION BEYOND EXTRATERRITORIAL JURISDICTION. (a) If [~~Except as provided by Subsection (b), if~~] a municipality extends its extraterritorial jurisdiction to include an area certificated to a retail public utility, the retail public utility may continue and extend service in its area of public convenience and necessity under the rights granted by its certificate and this chapter.

(b) A municipality that seeks to extend a certificate of public convenience and necessity beyond the municipality's extraterritorial jurisdiction must ensure that the municipality complies with Section 13.241 in relation to the area covered by the

portion of the certificate that extends beyond the municipality's extraterritorial jurisdiction.

(c) The commission, after notice to the municipality and an opportunity for a hearing, may decertify an area outside a municipality's extraterritorial jurisdiction if the municipality does not provide service to the area on or before the fifth anniversary of the date the certificate of public convenience and necessity was granted for the area. This subsection does not apply to a certificate of public convenience and necessity for an area:

(1) that was transferred to a municipality on approval of the commission; and

(2) in relation to which the municipality has spent public funds.

(d) To the extent of a conflict between this section and Section 13.245, Section 13.245 prevails [~~The commission may not extend a municipality's certificate of public convenience and necessity beyond its extraterritorial jurisdiction without the written consent of the landowner who owns the property in which the certificate is to be extended. The portion of any certificate of public convenience and necessity that extends beyond the extraterritorial jurisdiction of the municipality without the consent of the landowner is void~~].

SECTION 2.09. Subsection (a-1), Section 13.246, Water Code, is amended to read as follows:

(a-1) Except as otherwise provided by this subsection, in addition to the notice required by Subsection (a), the commission shall require notice to be mailed to each owner of a tract of land

that is at least 25 [~~50~~] acres and is wholly or partially included in the area proposed to be certified. Notice required under this subsection must be mailed by first class mail to the owner of the tract according to the most current tax appraisal rolls of the applicable central appraisal district at the time the commission received the application for the certificate or amendment. Good faith efforts to comply with the requirements of this subsection shall be considered adequate notice to landowners. Notice under this subsection is not required for a matter filed with the commission under:

(1) Section 13.248 or 13.255; or

(2) Chapter 65.

SECTION 2.10. Subsection (b), Section 15.102, Water Code, is amended to read as follows:

(b) The loan fund may also be used by the board to provide:

(1) grants or loans for projects that include supplying water and wastewater services in economically distressed areas or nonborder colonias as provided by legislative appropriations, this chapter, and board rules, including projects involving retail distribution of those services; and

(2) grants for:

(A) projects for which federal grant funds are placed in the loan fund;

(B) projects, on specific legislative appropriation for those projects; or

(C) water conservation, desalination, brush control, weather modification, regionalization, and projects

providing regional water quality enhancement services as defined by board rule, including regional conveyance systems.

SECTION 2.11. Subchapter Q, Chapter 15, Water Code, is amended by adding Section 15.9751 to read as follows:

Sec. 15.9751. PRIORITY FOR WATER CONSERVATION. The board shall give priority to applications for funds for the implementation of water supply projects in the state water plan by entities that:

(1) have already demonstrated significant water conservation savings; or

(2) will achieve significant water conservation savings by implementing the proposed project for which the financial assistance is sought.

SECTION 2.12. Section 16.017, Water Code, is amended to read as follows:

Sec. 16.017. TOPOGRAPHIC AND GEOLOGIC MAPPING. (a) The executive administrator shall carry out the program for topographic and geologic mapping of the state.

(b) The executive administrator shall operate as part of the Texas Natural Resources Information System a strategic mapping program to acquire, store, and distribute digital, geospatial information.

SECTION 2.13. Subchapter B, Chapter 16, Water Code, is amended by adding Sections 16.023 and 16.024 to read as follows:

Sec. 16.023. STRATEGIC MAPPING ACCOUNT. (a) The strategic mapping account is an account in the general revenue fund. The account consists of:

(1) money directly appropriated to the board;

(2) money transferred by the board from other funds available to the board;

(3) money from gifts or grants from the United States government, state, regional, or local governments, educational institutions, private sources, or other sources;

(4) proceeds from the sale of maps, data, publications, and other items; and

(5) interest earned on the investment of money in the account and depository interest allocable to the account.

(b) The account may be appropriated only to the board to:

(1) develop, administer, and implement the strategic mapping program;

(2) provide grants to political subdivisions for projects related to the development, use, and dissemination of digital, geospatial information; and

(3) administer, implement, and operate other programs of the Texas Natural Resources Information System, including:

(A) the operation of a Texas-Mexico border region information center for the purpose of implementing Section 16.021 (e)(5);

(B) the acquisition, storage, and distribution of historical maps, photographs, and paper map products;

(C) the maintenance and enhancement of information technology; and

(D) the production, storage, and distribution of other digital base maps, as determined by the executive

administrator or a state agency that is a member of the Texas Geographic Information Council.

(c) The board may invest, reinvest, and direct the investment of any available money in the fund as provided by law for the investment of money under Section 404.024, Government Code.

Sec. 16.024. FINANCIAL ASSISTANCE FOR DIGITAL, GEOSPATIAL INFORMATION PROJECTS. (a) A political subdivision seeking a grant under Section 16.023 must file an application with the board.

(b) An application must be filed in the manner and form required by board rules.

(c) In reviewing an application by a political subdivision for a grant, the board shall consider:

(1) the degree to which the political subdivision has used other available resources to finance the development, use, and dissemination of digital, geospatial information;

(2) the willingness and ability of the political subdivision to develop, use, and disseminate digital, geospatial information; and

(3) the benefits that will be gained by making the grant.

(d) The board may approve a grant to a political subdivision only if the board finds that:

(1) the grant will supplement rather than replace money of the political subdivision;

(2) the public interest is served by providing the grant; and

(3) the grant will further the state's ability to

gather, develop, use, and disseminate digital, geospatial information.

SECTION 2.14. Subsection (h), Section 16.053, Water Code, is amended by adding Subdivisions (10) and (11) to read as follows:

(10) The regional water planning group may amend the regional water plan after the plan has been approved by the board. Subdivisions (1)-(9) apply to an amendment to the plan in the same manner as those subdivisions apply to the plan.

(11) This subdivision applies only to an amendment to a regional water plan approved by the board. This subdivision does not apply to the adoption of a subsequent regional water plan for submission to the board as required by Subsection (i). Notwithstanding Subdivision (10), the regional water planning group may amend the plan in the manner provided by this subdivision if the executive administrator makes a written determination that the proposed amendment qualifies for adoption in the manner provided by this subdivision before the regional water planning group votes on adoption of the amendment. A proposed amendment qualifies for adoption in the manner provided by this subdivision only if the amendment is a minor amendment, as defined by board rules, that will not result in the overallocation of any existing or planned source of water, does not relate to a new reservoir, and will not have a significant effect on instream flows or freshwater inflows to bays and estuaries. If the executive administrator determines that a proposed amendment qualifies for adoption in the manner provided by this subdivision, the regional water planning group may adopt the amendment at a public meeting held in accordance

with Chapter 551, Government Code. The proposed amendment must be placed on the agenda for the meeting, and notice of the meeting must be given in the manner provided by Chapter 551, Government Code, at least two weeks before the date the meeting is held. The public must be provided an opportunity to comment on the proposed amendment at the meeting.

SECTION 2.15. Subsection (r), Section 16.053, Water Code, as added by Chapter 1097, Acts of the 79th Legislature, Regular Session, 2005, is amended to read as follows:

(r) The board by rule shall provide for reasonable flexibility to allow for a timely amendment of a regional water plan, the board's approval of an amended regional water plan, and the amendment of the state water plan. If an amendment under this subsection is[~~,~~] to facilitate planning for water supplies reasonably required for a clean coal project, as defined by Section 5.001, the[~~. The~~] rules may allow for amending a regional water plan without providing notice and without a public meeting or hearing under Subsection (h) if the amendment does not:

(1) significantly change the regional water plan, as reasonably determined by the board; or

(2) adversely affect other water management strategies in the regional water plan.

SECTION 2.16. Subchapter E, Chapter 16, Water Code, is amended by adding Section 16.1311 to read as follows:

Sec. 16.1311. PRIORITY FOR WATER CONSERVATION. The board shall give priority to applications for funds for implementation of water supply projects in the state water plan by entities that:

(1) have already demonstrated significant water conservation savings; or

(2) will achieve significant water conservation savings by implementing the proposed project for which the financial assistance is sought.

SECTION 2.17. Sections 16.315 and 16.319, Water Code, are amended to read as follows:

Sec. 16.315. POLITICAL SUBDIVISIONS; COMPLIANCE WITH FEDERAL REQUIREMENTS. All political subdivisions are hereby authorized to take all necessary and reasonable actions that are not less stringent than [~~to comply with~~] the requirements and criteria of the National Flood Insurance Program, including but not limited to:

(1) making appropriate land use adjustments to constrict the development of land which is exposed to flood damage and minimize damage caused by flood losses;

(2) guiding the development of proposed future construction, where practicable, away from a location which is threatened by flood hazards;

(3) assisting in minimizing damage caused by floods;

(4) authorizing and engaging in continuing studies of flood hazards in order to facilitate a constant reappraisal of the flood insurance program and its effect on land use requirements;

(5) engaging in floodplain management, [~~and~~] adopting and enforcing permanent land use and control measures that are not less stringent than those [~~consistent with the criteria~~] established under the National Flood Insurance Act, and providing

for the imposition of penalties on landowners who violate this subchapter or rules adopted or orders issued under this subchapter;

(6) declaring property, when such is the case, to be in violation of local laws, regulations, or ordinances which are intended to discourage or otherwise restrict land development or occupancy in flood-prone areas and notifying the director, or whomever the director designates, of such property;

(7) consulting with, giving information to, and entering into agreements with the Federal Emergency Management Agency for the purpose of:

(A) identifying and publishing information with respect to all flood areas, including coastal areas; and

(B) establishing flood-risk zones in all such areas and making estimates with respect to the rates of probable flood-caused loss for the various flood-risk zones for each of these areas;

(8) cooperating with the director's studies and investigations with respect to the adequacy of local measures in flood-prone areas as to land management and use, flood control, flood zoning, and flood damage prevention;

(9) taking steps, using regional, watershed, and multi-objective approaches, to improve the long-range management and use of flood-prone areas;

(10) purchasing, leasing, and receiving property from the director when such property is owned by the federal government and lies within the boundaries of the political subdivision pursuant to agreements with the Federal Emergency Management Agency

or other appropriate legal representative of the United States Government;

(11) requesting aid pursuant to the entire authorization from the commission;

(12) satisfying criteria adopted and promulgated by the commission pursuant to the National Flood Insurance Program;

(13) adopting permanent land use and control measures with enforcement provisions that are not less stringent than [~~which are consistent with~~] the criteria for land management and use adopted by the director;

(14) adopting more comprehensive floodplain management rules that the political subdivision determines are necessary for planning and appropriate to protect public health and safety;

(15) participating in floodplain management and mitigation initiatives such as the National Flood Insurance Program's Community Rating System, Project Impact, or other initiatives developed by federal, state, or local government; and

(16) collecting reasonable fees to cover the cost of administering a local floodplain management program.

Sec. 16.319. QUALIFICATION. Political subdivisions wishing to qualify under the National Flood Insurance Program shall have the authority to do so by complying with the directions of the Federal Emergency Management Agency and by:

(1) evidencing to the director a positive interest in securing flood insurance coverage under the National Flood Insurance Program; and

(2) giving to the director satisfactory assurance that measures will have been adopted for the political subdivision that [~~which measures~~] will be not less stringent than [~~consistent with~~] the comprehensive criteria for land management and use developed by the Federal Emergency Management Agency.

SECTION 2.18. Chapter 16, Water Code, is amended by adding Subchapter K to read as follows:

SUBCHAPTER K. WATER CONSERVATION

Sec. 16.401. STATEWIDE WATER CONSERVATION PUBLIC AWARENESS PROGRAM. (a) The executive administrator shall develop and implement a statewide water conservation public awareness program to educate residents of this state about water conservation. The program shall take into account the differences in water conservation needs of various geographic regions of the state and shall be designed to complement and support existing local and regional water conservation programs.

(b) The executive administrator is required to develop and implement the program required by Subsection (a) in a state fiscal biennium only if the legislature appropriates sufficient money in that biennium specifically for that purpose.

Sec. 16.402. WATER CONSERVATION PLAN REVIEW. (a) Each entity that is required to submit a water conservation plan to the commission under this code shall submit a copy of the plan to the executive administrator.

(b) Each entity that is required to submit a water conservation plan to the executive administrator, board, or commission under this code shall report annually to the executive

administrator on the entity's progress in implementing the plan.

(c) The executive administrator shall review each water conservation plan and annual report to determine compliance with the minimum requirements established by Section 11.1271 and the submission deadlines developed under Subsection (e) of this section.

(d) The board may notify the commission if the board determines that an entity has violated this section or a rule adopted under this section. Notwithstanding Section 7.051(b), a violation of this section or of a rule adopted under this section is enforceable in the manner provided by Chapter 7 for a violation of a provision of this code within the commission's jurisdiction or of a rule adopted by the commission under a provision of this code within the commission's jurisdiction.

(e) The board and commission jointly shall adopt rules:

(1) identifying the minimum requirements and submission deadlines for the annual reports required by Subsection (b); and

(2) providing for the enforcement of this section and rules adopted under this section.

SECTION 2.19. Section 17.125, Water Code, is amended by adding Subsection (b-2) to read as follows:

(b-2) The board shall give priority to applications for funds for implementation of water supply projects in the state water plan by entities that:

(1) have already demonstrated significant water conservation savings; or

(2) will achieve significant water conservation savings by implementing the proposed project for which the financial assistance is sought.

SECTION 2.20. Chapter 35, Water Code, is amended by adding Section 35.020 to read as follows:

Sec. 35.020. PUBLIC PARTICIPATION IN GROUNDWATER MANAGEMENT PROCESS. It is the policy of the state to encourage public participation in the groundwater management process in areas within a groundwater management area not represented by a groundwater conservation district.

SECTION 2.21. Subsection (d), Section 36.113, Water Code, is amended to read as follows:

(d) Before granting or denying a permit or permit amendment, the district shall consider whether:

(1) the application conforms to the requirements prescribed by this chapter and is accompanied by the prescribed fees;

(2) the proposed use of water unreasonably affects existing groundwater and surface water resources or existing permit holders;

(3) the proposed use of water is dedicated to any beneficial use;

(4) the proposed use of water is consistent with the district's certified water management plan;

(5) if the well will be located in the Hill Country Priority Groundwater Management Area, the proposed use of water from the well is wholly or partly to provide water to a pond, lake,

or reservoir to enhance the appearance of the landscape;

(6) the applicant has agreed to avoid waste and achieve water conservation; and

(7) [~~(6)~~] the applicant has agreed that reasonable diligence will be used to protect groundwater quality and that the applicant will follow well plugging guidelines at the time of well closure.

SECTION 2.22. Subsection (d), Section 36.117, Water Code, is amended to read as follows:

(d) Notwithstanding Subsection (b), a district may require a well to be permitted by the district and to comply with all district rules if:

(1) the withdrawals from a well in the Hill Country Priority Groundwater Management Area and exempted under Subsection (b)(1) are no longer used solely for domestic use or to provide water for livestock or poultry;

(2) the purpose of a well exempted under Subsection (b)(2) is no longer solely to supply water for a rig that is actively engaged in drilling or exploration operations for an oil or gas well permitted by the Railroad Commission of Texas; or

(3) [~~(2)~~] the withdrawals from a well exempted under Subsection (b)(3) are no longer necessary for mining activities or are greater than the amount necessary for mining activities specified in the permit issued by the Railroad Commission of Texas under Chapter 134, Natural Resources Code.

SECTION 2.23. Subchapter H, Chapter 49, Water Code, is amended by adding Section 49.2205 to read as follows:

Sec. 49.2205. USE OF RIGHT-OF-WAY EASEMENTS FOR CERTAIN ENERGY-RELATED PURPOSES. (a) To foster the generation and transmission of electricity from clean coal projects, as defined by Section 5.001, renewable energy technology projects, and the capture and storage of carbon dioxide and other greenhouse gases, a district or water supply corporation may allow others to construct, maintain, and operate transmission lines and pipelines over, under, across, on, or along rights-of-way and easements of the district or water supply corporation for transmission of electricity generated by those projects and the transportation of carbon dioxide and other greenhouse gases, unless the use:

(1) is incompatible with the public use for which the easement was acquired or condemned; or

(2) compromises public health or safety.

(b) The district or water supply corporation is not required to obtain additional consideration for the construction, maintenance, and operation of the transmission lines and pipelines under this section if the person constructing, maintaining, and operating the transmission lines and pipelines bears all costs of the construction, maintenance, and operation of the transmission lines and pipelines and restoring the property. The activities authorized by this subsection may be exercised only with the consent of and subject to the direction of the governing body of the district or water supply corporation.

(c) A person that is subject to Subsection (a) that acquires a right-of-way easement on real property for a public use may include in the notice of the acquisition a statement that to foster

the generation and transmission of electricity from clean coal projects as defined by Section 5.001, Water Code, renewable energy technology projects, and the capture and storage of carbon dioxide and other greenhouse gases, water districts and water supply corporations may allow others to construct, maintain, and operate transmission lines and pipelines over, under, across, on, or along the rights-of-way and easements for the transmission of electricity that is generated by those projects and transportation of carbon dioxide and other greenhouse gases, unless the use:

(1) is incompatible with the public use for which the easement was acquired or condemned; or

(2) compromises public health or safety.

(d) This section applies only to a right-of-way or easement acquired by the district or water supply corporation on or after September 1, 2007.

(e) This section does not apply to a right-of-way or easement that is used for the transmission of electricity without the consent of a person owning the transmission lines if that use began before September 1, 2007.

SECTION 2.24. Chapter 49, Water Code, is amended by adding Subchapter O to read as follows:

SUBCHAPTER O. EFFECT OF SUBDIVISION OF NONAGRICULTURAL LAND ON WATER RIGHTS

Sec. 49.501. DEFINITION. In this subchapter, "municipal water supplier" means a municipality or a water supply corporation.

Sec. 49.502. APPLICABILITY. This subchapter applies only to a district, other than a drainage district, located wholly or

partly in a county:

(1) that borders the Gulf of Mexico and the United Mexican States; or

(2) that is adjacent to a county described by Subdivision (1).

Sec. 49.503. PETITION BY MUNICIPAL WATER SUPPLIER TO CONVERT WATER USE AFTER SUBDIVISION. (a) This section applies only to land:

(1) that is:

(A) subdivided into town lots or blocks or small parcels of the same general nature as town lots or blocks;

(B) designed, intended, or suitable for residential or other nonagricultural purposes, including streets, alleys, parkways, parks, detention or retention ponds, and railroad property and rights-of-way; or

(C) in a subdivision created to meet the requirements of a governmental entity authorized to require a recorded plat of subdivided lands;

(2) that is in a subdivision for which a plat or map has been filed and recorded in the office of the county clerk of each county in which the subdivision is wholly or partly located; and

(3) that is or was assessed as flat rate irrigable property in the municipal water supplier's certificated service area or its corporate area.

(b) A municipal water supplier that serves land described by Subsection (a) may petition the district in accordance with this

section to convert the proportionate irrigation water right to the Rio Grande from irrigation use to municipal use with municipal priority of allocation under commission rules, for the use and benefit of the municipal water supplier.

(c) The municipal water supplier must file the petition with the district not later than January 1 after the expiration of two years after the date the plat or map was recorded under Subsection (a). The district shall consider the petition not later than January 31 of the year following the year in which the petition was filed.

(d) The petition must identify by subdivision name or other sufficient description the land that the municipal water supplier supplies or has the right to supply potable water.

(e) This section applies only to one subdivision of the land recorded under Subsection (a). This section does not apply to any further subdivision of the same property.

Sec. 49.504. EFFECT OF MUNICIPAL WATER SUPPLIER'S FAILURE TO FILE A PETITION. (a) If a municipal water supplier does not file a petition under Section 49.503, the district may retain the water rights for use by the district or may declare the water as excess and contract for the sale or use of the water as determined by the district.

(b) Before a district may contract for the sale or use of water for more than one year with a purchaser located outside of a county described by Section 49.502, the district must, for 90 days:

(1) make the water available under the same terms to all municipal water suppliers located in those counties; and

(2) advertise the offer to sell or contract for the use of the water by posting notice on:

(A) any website of the Rio Grande Watermaster's Office;

(B) any website of the Rio Grande Regional Water Authority; and

(C) the official posting place for the district's board meetings at the district's office.

(c) If, after the 90th day after the last date on which the district posted notice, a municipal water supplier in a county described by Section 49.502 has not contracted with the district for the sale or use of the water, the district may contract with any other person for the sale or use of the water under the terms of the offer advertised under Subsection (b).

Sec. 49.505. CALCULATION OF PROPORTIONATE WATER RIGHTS. A district that receives a petition under Section 49.503 shall compute the proportionate amount of water rights to the Rio Grande. The proportionate amount of water rights is equal to the amount of irrigable acres of land in the subdivision multiplied by the lesser of:

(1) 1.25 acre-feet per irrigable acre; or

(2) the sum of all irrigation water rights owned by the district on September 1, 2007, as if the water rights had been converted to municipal use under applicable commission rules, divided by the total amount of irrigable acres of land in the district on September 1, 2007.

Sec. 49.506. PROVISION OR CONVERSION OF PROPORTIONATE WATER

RIGHTS BY DISTRICT. (a) Not later than the second anniversary of the date the municipal water supplier files a petition under Section 49.503:

(1) a district shall provide the municipal water supplier with the proportionate water rights described by Section 49.505 from the district's existing water rights; or

(2) a district shall, if the district does not have sufficient existing water rights:

(A) apply for appropriate amendments to the district's water rights under commission rules to convert the proportionate water rights from irrigation use to municipal use with municipal priority of allocation; and

(B) provide to the municipal water supplier the converted rights described by Section 49.505.

(b) The district may continue to use the irrigation use water for district purposes until:

(1) the commission approves the amendment to the district's water rights; or

(2) the water is otherwise provided to the municipal water supplier.

(c) A district that applies for appropriate amendments under Subsection (a)(2) shall provide the municipal water supplier with an estimate of the district's reasonable costs for the administrative proceedings. The district is not required to begin the proceedings until the municipal water supplier deposits the amount of the estimate with the district. The municipal water supplier shall pay the district any reasonable costs that exceed

the estimate. The district shall refund the balance of the deposit if the actual cost is less than the estimate.

Sec. 49.507. CONTRACT TO PURCHASE PROPORTIONATE WATER RIGHTS; WATER RIGHTS SALE CONTRACT. (a) A municipal water supplier may contract to purchase the proportionate water rights described by Section 49.505.

(b) The purchase price may not exceed 68 percent of the current market value, as determined under Section 49.509, for the year that the municipal water supplier petitions the district.

(c) The contract must be in writing in a document entitled "Water Rights Sales Contract."

(d) The contract must include the purchase price for the water rights or, if the consideration for the sale is not monetary, the terms of the sale.

(e) The municipal water supplier shall file the contract with the Rio Grande watermaster not later than the 10th day after the date the contract is executed.

(f) The municipal water supplier shall pay the purchase price when the proportionate amount of water rights is made available to the municipal water supplier.

Sec. 49.508. CONTRACT TO USE PROPORTIONATE WATER RIGHTS; WATER SUPPLY CONTRACT. (a) A municipal water supplier may contract to use water associated with the proportionate water rights described by Section 49.505.

(b) The contract must be for at least 40 years.

(c) The price for the contractual right to use the municipal use water is based on an amount for one acre-foot of municipal use

water with a municipal use priority of allocation and may not exceed the sum of:

(1) an amount equal to the district's annual flat rate charge per assessed acre; and

(2) the equivalent of the charge for four irrigations per flat rate acre of irrigable property in the district.

(d) The parties to the contract shall agree on the terms of payment of the contract price.

(e) The board periodically shall determine the flat rate charge and irrigation per acre charge described by Subsection (c).

(f) The contract must be in writing in a document entitled "Water Supply Contract." The contract may contain any terms to which the parties agree.

(g) The municipal water supplier shall file the contract with the Rio Grande watermaster not later than the 10th day after the date the contract is executed.

Sec. 49.509. DUTY OF RIO GRANDE REGIONAL WATER AUTHORITY TO CALCULATE CURRENT MARKET VALUE. (a) The Rio Grande Regional Water Authority annually at its January meeting shall calculate the current market value by using the average price per acre-foot of municipal use water after conversion from irrigation use water to municipal use water with a municipal priority of allocation under commission rules of the last three purchases involving:

(1) a municipal water supplier;

(2) a party other than a municipal water supplier; and

(3) at least 100 acre-feet of municipal use water, with municipal priority of allocation.

(b) The Rio Grande Regional Water Authority shall use information from the water rights sales contracts reported to the Rio Grande Watermaster's Office to calculate the current market value.

(c) The Rio Grande Regional Water Authority shall make the calculation:

(1) without charging any of the parties involved; and

(2) using 100 percent of the value of monetary exchanges, not in-kind exchanges.

Sec. 49.510. ACCOUNTING FOR SALE OF WATER RIGHTS. A district shall maintain an accounting of money received from the sale of water rights under this subchapter.

Sec. 49.511. CAPITAL IMPROVEMENTS. A district shall designate at least 75 percent of the proceeds from the sale of water rights for capital improvements in the district.

Sec. 49.512. MAP OF SERVICE AREA. (a) In this section, "outer boundaries of a district" means district boundaries without considering any exclusion of land from inside the district.

(b) Each municipal water supplier that has a certificate of convenience and necessity service area in the outer boundaries of a district shall file a map of the service area with the district.

(c) The municipal water supplier shall update the map and forward the map to the district when changes are made.

(d) A district periodically shall provide to a municipal water supplier that serves territory in the district a copy of the district's map showing the outer boundaries of the district.

(e) A district may request from a municipal water supplier a

map of the municipal water supplier's service area, and a municipal water supplier may request from the district a map of the district's outer boundaries. On request, the district and a municipal water supplier shall provide the map free of charge to each other at least one time each year. If the district or municipal water supplier receives more than one request a year for a map, the district or municipal water supplier may charge a reasonable fee for the map.

SECTION 2.25. Subchapter Z, Chapter 51, Education Code, is amended by adding Section 51.969 to read as follows:

Sec. 51.969. ON-SITE RECLAIMED SYSTEM TECHNOLOGIES CURRICULUM. The Texas Higher Education Coordinating Board shall encourage each institution of higher education to develop curriculum and provide related instruction regarding on-site reclaimed system technologies, including rainwater harvesting, condensate collection, or cooling tower blow down.

SECTION 2.26. Chapter 68, Education Code, is amended by adding Subchapter B to read as follows:

SUBCHAPTER B. POWERS AND DUTIES OF BOARD

Sec. 68.21. SUSTAINABLE WATER SUPPLY RESEARCH CENTER. (a) In this section, "center" means the Sustainable Water Supply Research Center.

(b) The board may establish and operate the Sustainable Water Supply Research Center as part of The University of Texas at Arlington.

(c) If established, the center shall:

(1) conduct, sponsor, or direct multidisciplinary research directed toward:

(A) promoting water conservation through development of a sustainable water supply for this state; and

(B) mitigating the effect of diminishing water supplies on the economy and people of this state; and

(2) conduct a comprehensive, interdisciplinary instructional program in water conservation with emphasis on development of a sustainable water supply at the graduate level and offer undergraduate courses for students interested in water conservation and sustainable water supply development.

(d) The organization, control, and management of the center are vested in the board.

(e) The center may enter into an agreement or may cooperate with a public or private entity to perform the research functions of the center.

(f) The board may solicit, accept, and administer gifts and grants from any public or private source for the use and benefit of the center.

SECTION 2.27. Section 447.004, Government Code, is amended by adding Subsection (c-1) to read as follows:

(c-1) The procedural standards adopted under this section must require that on-site reclaimed system technologies, including rainwater harvesting, condensate collection, or cooling tower blow down, or a combination of those system technologies, for nonpotable indoor use and landscape watering be incorporated into the design and construction of:

(1) each new state building with a roof measuring at least 10,000 square feet; and

(2) any other new state building for which the incorporation of such systems is feasible.

SECTION 2.28. Section 341.042, Health and Safety Code, is amended to read as follows:

Sec. 341.042. STANDARDS FOR HARVESTED RAINWATER. (a) The commission shall establish recommended standards relating to the domestic use of harvested rainwater, including health and safety standards for treatment and collection methods for harvested rainwater intended for drinking, cooking, or bathing.

(b) The commission by rule shall provide that if a structure is connected to a public water supply system and has a rainwater harvesting system for indoor use:

(1) the structure must have appropriate cross-connection safeguards; and

(2) the rainwater harvesting system may be used only for nonpotable indoor purposes.

(c) Standards and rules adopted by the commission under this chapter governing public drinking water supply systems do not apply to a person:

(1) who harvests rainwater for domestic use; and

(2) whose property is not connected to a public drinking water supply system.

SECTION 2.29. Subsection (b), Section 212.0101, Local Government Code, is amended to read as follows:

(b) The Texas [~~Natural Resource Conservation~~] Commission on Environmental Quality by rule shall establish the appropriate form and content of a certification to be attached to a plat application

under this section.

SECTION 2.30. Subsection (b), Section 232.0032, Local Government Code, is amended to read as follows:

(b) The Texas [~~Natural Resource Conservation~~] Commission on Environmental Quality by rule shall establish the appropriate form and content of a certification to be attached to a plat application under this section.

SECTION 2.31. Chapter 401, Local Government Code, is amended by adding Section 401.006 to read as follows:

Sec. 401.006. WATER CONSERVATION BY HOME-RULE MUNICIPALITY. A home-rule municipality may adopt and enforce ordinances requiring water conservation in the municipality and by customers of the municipality's municipally owned water and sewer utility in the extraterritorial jurisdiction of the municipality.

SECTION 2.32. Subchapter Z, Chapter 402, Local Government Code, is amended by adding Section 402.911 to read as follows:

Sec. 402.911. DUTIES OF WATER SERVICE PROVIDER TO AN AREA SERVED BY SEWER SERVICE OF CERTAIN POLITICAL SUBDIVISIONS. (a) This section applies only to an area:

(1) that is located in a county that has a population of more than 1.3 million; and

(2) in which a customer's sewer service is provided by a municipality or conservation and reclamation district that also provides water service to other customers and the same customer's water service is provided by another entity.

(b) For each person the water service provider serves in an area to which this section applies, the water service provider

shall provide the municipality or district with any relevant customer information so that the municipality or district may bill users of the sewer service directly and verify the water consumption of users. Relevant customer information provided under this section includes the name, address, and telephone number of the customer of the water service provider, the monthly meter readings of the customer, monthly consumption information, including any billing adjustments, and certain meter information, such as brand, model, age, and location.

(c) The municipality or district shall reimburse the water service provider for its reasonable and actual incremental costs for providing services to the municipality or district under this section. Incremental costs are limited to only those costs that are in addition to the water service provider's costs in providing its services to its customers, and those costs must be consistent with the costs incurred by other water utility providers. Only if requested by the wastewater provider, the water service provider must provide the municipality or district with documentation certified by a certified public accountant of the reasonable and actual incremental costs for providing services to the municipality or district under this section.

(d) A municipality or conservation and reclamation district may provide written notice to a person to whom the municipality's or district's sewer service system provides service if the person has failed to pay for the service for more than 90 days. The notice must state the past due amount owed and the deadline by which the past due amount must be paid or the person will lose water service. The

notice may be sent by mail or hand-delivered to the location at which the sewer service is provided.

(e) The municipality or district may notify the water service provider of a person who fails to make timely payment after the person receives notice under Subsection (d). The notice must indicate the number of days the person has failed to pay for sewer service and the total amount past due. On receipt of the notice, the water service provider shall discontinue water service to the person.

(f) This section does not apply to a nonprofit water supply or sewer service corporation created under Chapter 67, Water Code, or a district created under Chapter 65, Water Code.

SECTION 2.33. Section 430.003, Local Government Code, is amended to read as follows:

Sec. 430.003. EXEMPTIONS OF CERTAIN [~~STATE~~] PROPERTY FROM INFRASTRUCTURE FEES. No county, municipality, or utility district may collect from a state agency or a public or private institution of higher education any fee charged for the development or maintenance of programs or [~~of~~] facilities for the control of excess water or storm water.

SECTION 2.34. Section 1903.053, Occupations Code, is amended to read as follows:

Sec. 1903.053. STANDARDS. (a) The commission shall adopt by rule and enforce standards governing:

(1) the connection of irrigation systems to any water supply;

(2) the design, installation, and operation of

irrigation systems;

(3) water conservation; and

(4) the duties and responsibilities of licensed irrigators.

(b) [~~The commission may adopt standards for irrigation that include water conservation, irrigation system design and installation, and compliance with municipal codes.~~

[~~(c)~~] The commission may not require or prohibit the use of any irrigation system, component part, or equipment of any particular brand or manufacturer.

(c) In adopting standards under this section, the commission shall consult the council.

SECTION 2.35. (a) In this section, "board" means the Texas Water Development Board.

(b) The board, in coordination with the Far West Texas Regional Water Planning Group established pursuant to Section 16.053, Water Code, shall conduct a study regarding the possible impact of climate change on surface water supplies from the Rio Grande.

(c) In conducting the study, the board shall convene a conference within the Far West Texas regional water planning area designated pursuant to Section 16.053, Water Code, to review:

(1) any analysis conducted by a state located to the west of this state regarding the impact of climate change on surface water supplies in that state;

(2) any other current analysis of potential impacts of climate change on surface water resources; and

(3) recommendations for incorporation of potential impacts of climate change into the Far West Texas Regional Water Plan, including potential impacts to the Rio Grande in Texas subject to the Rio Grande Compact and identification of feasible water management strategies to offset any potential impacts.

(d) The conference should include, but not be limited to, the participation of representatives of:

(1) the Far West Texas Regional Water Planning Group;

(2) water authorities;

(3) industrial customers;

(4) agricultural interests;

(5) municipalities;

(6) fishing or recreational interests;

(7) environmental advocacy organizations; and

(8) institutions of higher education.

(e) Not later than December 31, 2008, the board shall submit to the legislature a written report regarding the study findings under this section.

SECTION 2.36. (a) Chapter 9, Water Code, is repealed.

(b) The Texas Water Advisory Council is abolished on the effective date of this article.

SECTION 2.37. Chapter 64, Water Code, is repealed.

SECTION 2.38. As soon as practicable on or after the effective date of this article, the Texas Water Development Board shall appoint the initial members of the Water Conservation Advisory Council, as required by Section 10.003, Water Code, as added by this article. In making the initial appointments, the

board shall designate seven members to serve terms expiring August 31, 2009, eight members to serve terms expiring August 31, 2011, and eight members to serve terms expiring August 31, 2013.

SECTION 2.39. The changes made by this Act to Section 13.2451, Water Code, apply only to:

(1) an application for a certificate of public convenience and necessity or for an amendment to a certificate of public convenience and necessity submitted to the Texas Commission on Environmental Quality on or after the effective date of this Act;

(2) a proceeding to amend or revoke a certificate of public convenience and necessity initiated on or after the effective date of this Act;

(3) a certificate of public convenience and necessity issued to a municipality, regardless of the date the certificate was issued;

(4) an application by a municipality or by a utility owned by a municipality for a certificate of public convenience and necessity or for an amendment to a certificate, regardless of the date the application was filed; and

(5) a proceeding to amend or revoke a certificate of public convenience and necessity held by a municipality or by a utility owned by a municipality, regardless of the date the proceeding was initiated.

SECTION 2.40. Sections 15.102 and 17.125, Water Code, as amended by this article, and Sections 15.9751 and 16.1311, Water Code, as added by this article, apply only to an application for financial assistance filed with the Texas Water Development Board

on or after the effective date of this article. An application for financial assistance filed before the effective date of this article is governed by the law in effect on the date the application was filed, and the former law is continued in effect for that purpose.

SECTION 2.41. The change in law made by Subchapter O, Chapter 49, Water Code, as added by this Act, applies only to a subdivision for which a plat or map has been recorded in the office of the county clerk of a county on or after the effective date of this Act. A subdivision for which a plat or map was recorded before the effective date of this Act is covered by the law in effect on the date the plat or map was recorded, and the former law is continued in effect for that purpose.

SECTION 2.42. Not later than June 1, 2008, the Texas Commission on Environmental Quality shall adopt standards as required by Section 1903.053, Occupations Code, as amended by this article, to take effect January 1, 2009.

SECTION 2.43. Section 2.27 of this article, adding Subsection (c-1), Section 447.004, Government Code, takes effect September 1, 2009.

ARTICLE 3. CONSTRUCTION AND OPERATION OF RESERVOIRS

SECTION 3.01. Section 16.051, Water Code, is amended by adding Subsection (i) to read as follows:

<u>(i) For purposes of this section, the acquisition of fee title or an easement by a political subdivision for the purpose of providing retail public utility service to property in the reservoir site or allowing an owner of property in the reservoir</u>

site to improve or develop the property may not be considered a significant impairment that prevents the construction of a reservoir site under Subsection (g). A fee title or easement acquired under this subsection may not be considered the basis for preventing the future acquisition of land needed to construct a reservoir on a designated site.

SECTION 3.02. Subchapter E, Chapter 16, Water Code, is amended by adding Sections 16.143 and 16.144 to read as follows:

Sec. 16.143. OPTION TO LEASE. (a) A former owner of real property used for agricultural purposes that was acquired, voluntarily or through the exercise of the power of eminent domain, for a reservoir whose site has been designated as unique for the construction of a reservoir under Section 16.051(g) is entitled to lease the property from the person who acquired the property under terms that allow the former owner to continue to use the property for agricultural purposes until the person who acquired the property determines that such use must be terminated to allow for the physical construction of the reservoir. Consistent with Subsection (b), the lease is subject to the terms and conditions set forth by the person who has acquired the property that are related to the use of the property by the former owner, including the term of the lease, the rent the former owner is required to pay under the lease, and the uses that may be allowed on the property during the term of the lease.

(b) A former owner of real property used for agricultural purposes is entitled to lease the property for the property's agricultural rental value until the person who acquired the

property determines that the lease must be terminated to allow for the physical construction of the reservoir.

Sec. 16.144. ENVIRONMENTAL MITIGATION. (a) If a person proposing to construct a reservoir whose site has been designated as unique for the construction of a reservoir under Section 16.051(g) is required to mitigate future adverse environmental effects arising from the construction or operation of the reservoir or its related facilities, the person shall, if authorized by the applicable regulatory authority, attempt to mitigate those effects by offering to contract with and pay an amount of money to an owner of real property located outside of the reservoir site to maintain the property through an easement instead of acquiring the fee simple title to the property for that purpose.

(b) An owner of real property may reject an offer made under Subsection (a). If agreement on the terms of an easement under Subsection (a) cannot be reached by the parties after a good faith attempt and offer is made, then the party constructing the reservoir may obtain fee title to the property through voluntary or involuntary means.

ARTICLE 4. UNIQUE RESERVOIR SITES AND SITES OF UNIQUE ECOLOGICAL VALUE

SECTION 4.01. Section 16.051, Water Code, is amended by adding Subsection (g-1) to read as follows:

(g-1) Notwithstanding any other provisions of law, a site is considered to be a designated site of unique value for the construction of a reservoir if the site is recommended for designation in the 2007 state water plan adopted by the board and in

effect on May 1, 2007. The designation of a unique reservoir site under this subsection terminates on September 1, 2015, unless there is an affirmative vote by a proposed project sponsor to make expenditures necessary in order to construct or file applications for permits required in connection with the construction of the reservoir under federal or state law.

SECTION 4.02. DESIGNATION OF SITES OF UNIQUE ECOLOGICAL VALUE. The legislature, as authorized by Subsection (f), Section 16.051, Water Code, designates those river or stream segment sites recommended in the 2007 state water plan as being of unique ecological value.

SECTION 4.03. RESTRICTION ON ELIGIBILITY TO HOLD WATER RIGHTS; LIABILITY FOR CONSTRUCTION, OPERATION, AND MAINTENANCE COSTS. (a) This section applies only to the proposed Marvin Nichols and Lake Fastrill reservoirs.

(b) The right to appropriate at least 20 percent of the quantity of water that is authorized to be appropriated from each proposed reservoir must be held by one or more entities located in the regional water planning area in which the reservoir is to be located.

(c) If one or more entities located outside the regional water planning area in which a proposed reservoir is to be located are to hold the right to appropriate a majority of the quantity of water that is authorized to be appropriated from the reservoir, that entity or those entities must pay all of the costs of constructing, operating, and maintaining the reservoir until such time as one or more entities located in the regional water planning

area in which the reservoir is to be located begins diverting water. At such time, the entity or entities making a diversion shall pay a pro-rata share of the cost of operating and maintaining the reservoir.

SECTION 4.04. STUDY COMMISSION ON REGION C WATER SUPPLY. (a) The Study Commission on Region C Water Supply is established. The study commission consists of six members as follows:

(1) three members appointed by the Region C Regional Water Planning Group; and

(2) three members appointed by the Region D Regional Water Planning Group.

(b) A member of the study commission may be, but is not required to be, a voting member of the regional water planning group that appointed the member.

(c) The members of the study commission shall select a presiding officer from among the members.

(d) Members of the study commission are not entitled to compensation for service on the study commission but may be reimbursed for travel expenses incurred while conducting the business of the study commission, as provided for in the General Appropriations Act.

(e) The study commission shall:

(1) review the water supply alternatives available to the Region C Regional Water Planning Area, including obtaining additional water supply from Wright Patman Lake, Toledo Bend Reservoir, Lake Texoma, Lake O' the Pines, other existing and proposed reservoirs, and groundwater;

(2) in connection with the review under Subdivision (1) of this subsection, analyze the socioeconomic effect on the area where the water supply is located that would result from the use of the water to meet the water needs of the Region C Regional Water Planning Area, including:

(A) the effects on landowners, agricultural and natural resources, businesses, industries, and taxing entities of different water management strategies; and

(B) in connection with the use by the Region C Regional Water Planning Area of water from Wright Patman Lake, the effect on water availability in that lake and the effect on industries relying on that water availability;

(3) determine whether water demand in the Region C Regional Water Planning Area may be reduced through additional conservation and reuse measures so as to postpone the need for additional water supplies;

(4) evaluate measures that would need to be taken to comply with the mitigation requirements of the United States Army Corps of Engineers in connection with any proposed new reservoirs, including identifying potential mitigation sites;

(5) consider whether the mitigation burden described by Subdivision (4) of this subsection may be shared by the Regions C and D Regional Water Planning Areas in proportion to the allocation to each region of water in any proposed reservoir;

(6) review innovative methods of compensation to affected property owners, including royalties for water stored on acquired properties and annual payments to landowners for

properties acquired for the construction of a reservoir to satisfy future water management strategies;

(7) evaluate the minimum number of surface acres required for the construction of proposed reservoirs in order to develop adequate water supply; and

(8) identify the locations of proposed reservoir sites and proposed mitigation sites, as applicable, as selected in accordance with existing state and federal law, in the Regions C and D Regional Water Planning Areas using satellite imagery with sufficient resolution to permit land ownership to be determined.

(f) The study commission may not be assisted by any person that is a party to or is employed by a party to a contract to perform engineering work with respect to site selection, permitting, design, or construction of the proposed Marvin Nichols reservoir.

(g) The Texas Water Development Board, on request of the study commission, may provide staff support or other assistance necessary to enable the study commission to carry out its duties. The Texas Water Development Board shall provide funding for the study commission, including funding of any studies conducted by the study commission, from the regional planning budget of the board.

(h) Not later than December 1, 2010, the study commission shall deliver a report to the governor, lieutenant governor, and speaker of the house of representatives that includes:

(1) any studies completed by the study commission;

(2) any legislation proposed by the study commission;

(3) a recommendation as to whether Marvin Nichols should remain a designated reservoir site; and

(4) other findings and recommendations of the study commission.

(i) The study commission is abolished and this section expires December 31, 2011.

SECTION 4.05. EFFECTIVE DATE. This article takes effect immediately if this Act receives a vote of two-thirds of all the members elected to each house, as provided by Section 39, Article III, Texas Constitution. If this Act does not receive the vote necessary for immediate effect, this article takes effect September 1, 2007.

ARTICLE 5. LEGISLATIVE JOINT INTERIM COMMITTEE

SECTION 5.01. (a) In this section, "committee" means the joint interim committee on state water funding.

(b) The committee is composed of eight members as follows:

(1) the chair of the Senate Committee on Natural Resources and the chair of the House Committee on Natural Resources who shall serve as joint chairs of the committee;

(2) three members of the senate appointed by the lieutenant governor; and

(3) three members of the house of representatives appointed by the speaker of the house of representatives.

(c) An appointed member of the committee serves at the pleasure of the appointing official.

(d) The committee shall meet at least annually with the executive director of the Texas Commission on Environmental Quality and the executive administrator of the Texas Water Development Board to:

(1) receive information on water infrastructure needs as identified in the state water plan;

(2) receive information on infrastructure cost and funding options to be used by local entities to meet the needs identified in the state water plan;

(3) receive analyses of the funding gap and recommendations on how to address those funding needs;

(4) receive information on whether all water fees assessed are sufficient to support the required regulatory water-related state program functions and activities; and

(5) identify viable, sustainable, dedicated revenues and fee sources, or increases to existing revenue and fees, to support state water programs and to provide for natural resources data collection and dissemination, financial assistance programs, and water resources planning, including funding to implement water management strategies in the state water plan.

(e) The committee may hold hearings and may request reports and other information from state agencies as necessary to carry out this section.

(f) The Senate Committee on Natural Resources and the House Committee on Natural Resources shall provide staff necessary for the committee to fulfill its duties.

(g) Not later than December 1, 2008, the committee shall report to the governor, the lieutenant governor, and the speaker of the house of representatives on the committee's activities under Subsection (d) of this section. The report shall include recommendations of any legislative action necessary to address

funding needs to support the state's water programs and water infrastructure needs.

ARTICLE 6. WATER DEVELOPMENT BOARD

SECTION 6.01. Section 16.344, Water Code, is amended by adding Subsections (d) through (i) to read as follows:

(d) Notwithstanding Section 16.343(g) or Section 16.350(a), a political subdivision may temporarily continue to receive funds under Subchapter K, Chapter 17, if the political subdivision submits a request for temporary continuation of funding and the board determines that:

(1) the political subdivision's initial funding application and any amendments for a designated area were reviewed and approved by the board before January 1, 2007;

(2) withholding funds would result in an undue hardship for occupants of the property to be served by unreasonably delaying the provision of adequate water or wastewater services;

(3) withholding funds would result in inefficient use of local, state, or federal funds under the program;

(4) the political subdivision has committed to take the necessary and appropriate actions to correct any deficiencies in adoption or enforcement of the model rules within the time designated by the board, but not later than the 90th day after the date the board makes the determinations under this subsection;

(5) the political subdivision has sufficient safeguards in place to prevent the proliferation of colonias; and

(6) during the 30 days after the date the board receives a request under this subsection, the board, after

consulting with the attorney general, secretary of state, and commission, has not received an objection from any of those entities to the request for temporary continuation of funding.

(e) In applying Subsection (d) to applications for increased financial assistance, the board shall only consider areas that were included in the initial application, except that the board may reconsider the eligibility of areas that were the subject of a facility plan in the initial application and that may be determined to be eligible based on criteria in effect September 1, 2005.

(f) The political subdivision shall take necessary and appropriate actions to correct any deficiencies in its adoption and enforcement of the model rules within the time period required by the board, not to exceed the 90-day period described by Subsection (d)(4), and provide evidence of compliance to the board. The board shall discontinue funding unless the board makes a determination based on the evidence provided that the political subdivision has demonstrated sufficient compliance to continue funding.

(g) Except as provided by Subsections (d)-(f), if the board determines that a county or city that is required to adopt and enforce the model rules is not enforcing the model rules, the board shall discontinue funding for all projects within the county or city that are funded under Subchapter K, Chapter 17.

(h) The board may not accept or grant applications for temporary funding under Subsection (d) after June 1, 2009.

(i) Subsections (d), (e), (f), (g), and (h) and this subsection expire September 1, 2009.

ARTICLE 7. RATE CLASSES FOR BILLING

SECTION 7.01. Subchapter H, Chapter 49, Water Code, is amended by adding Section 49.2122 to read as follows:

Sec. 49.2122. ESTABLISHMENT OF CUSTOMER CLASSES. (a) Notwithstanding any other law, a district may establish different charges, fees, rentals, or deposits among classes of customers that are based on any factor the district considers appropriate, including:

(1) the similarity of the type of customer to other customers in the class, including:

(A) residential;

(B) commercial;

(C) industrial;

(D) apartment;

(E) rental housing;

(F) irrigation;

(G) homeowner associations;

(H) builder;

(I) out-of-district;

(J) nonprofit organization; and

(K) any other type of customer as determined by the district;

(2) the type of services provided to the customer class;

(3) the cost of facilities, operations, and administrative services to provide service to a particular class of customer, including additional costs to the district for security,

recreational facilities, or fire protection paid from other revenues; and

(4) the total revenues, including ad valorem tax revenues and connection fees, received by the district from a class of customers relative to the cost of service to the class of customers.

(b) A district is presumed to have weighed and considered appropriate factors and to have properly established charges, fees, rentals, and deposits absent a showing that the district acted arbitrarily and capriciously.

ARTICLE 8. STUDY OF ROLE OF LAKE SOMERVILLE IN ECONOMIC DEVELOPMENT

SECTION 8.01. The legislature finds that:

(1) in 1954, the United States Congress authorized the construction of Lake Somerville to provide flood control, water conservation, and other beneficial uses for nearby areas; subsequently, the United States Army Corps of Engineers began reservoir construction in 1962 and began to impound water in 1967;

(2) straddling the borders of Burleson, Washington, and Lee Counties, on Yegua Creek 20 river miles upstream from that creek's confluence with the Brazos River, the lake has a storage capacity of 337,700 acre-feet;

(3) operation of the lake is supervised by the Fort Worth District of the United States Army Corps of Engineers; the lake is one of nine federal reservoirs that are integrated into the Brazos River Authority's basin-wide system and associated water resource development master plan;

(4) the Brazos River Authority owns the stored water,

a source from which it furnishes supplies to the City of Brenham according to a contract that was last renewed for a 10-year period in 2003;

(5) also significantly involved in the region is the Lower Colorado River Authority, which, from its diverse mix of power plants, provides wholesale electricity to various communities as well as offering them its economic research and expertise;

(6) although Lake Somerville has long been a tourist destination for fishing and other water recreation, the facility has not fully effectuated the three-county economic impact that originally was expected at the time that it was built; and

(7) a study of Lake Somerville's role in economic development would assist in explaining why the lake has not yet had that impact, beyond the tourism industry, and would help to identify impediments that currently restrict its contribution as well as strategies that would better maximize its economic potential.

SECTION 8.02. The Brazos River Authority and the Lower Colorado River Authority shall:

(1) conduct, with appropriate input from the public and private sectors, a joint baseline study of the role of Lake Somerville in the economic development of the surrounding vicinity; and

(2) jointly submit a full report of their findings and recommendations to the 81st Legislature when that legislature convenes in January 2009.

ARTICLE 9. AGUA SPECIAL UTILITY DISTRICT

SECTION 9.01. The heading to Chapter 7201, Special District Local Laws Code, is amended to read as follows:

CHAPTER 7201. AGUA [~~LA JOYA~~] SPECIAL UTILITY DISTRICT

SECTION 9.02. Section 7201.001, Special District Local Laws Code, is amended by amending Subdivision (3) and adding Subdivision (4) to read as follows:

(3) "Director" means a member of the board.

(4) "District" means the Agua [~~La Joya~~] Special Utility District.

SECTION 9.03. Subsection (c), Section 7201.002, Special District Local Laws Code, is amended to read as follows:

(c) The [~~On the effective date of the Act enacting this chapter, the~~] corporation shall be dissolved and succeeded without interruption by the district as provided by Subchapter A1.

SECTION 9.04. Section 7201.005, Special District Local Laws Code, is amended by amending Subsections (a) and (b) and adding Subsection (d) to read as follows:

(a) The [~~boundaries of the corporation and initial boundaries of the~~] district is composed of the territory described by Section 9.12 of the Act enacted by the 80th Legislature, Regular Session, 2007, amending this subsection [~~are coextensive with the service areas covered by Certificates of Convenience and Necessity Nos. 10559 and 20785, as recorded on the Texas Commission on Environmental Quality maps associated with those certificates. Those maps are incorporated in this section by reference~~].

(b) The boundaries and field notes contained in Section 9.12

of the Act enacted by the 80th Legislature, Regular Session, 2007, amending this subsection form a closure. A mistake made in the field notes or in copying the field notes in the legislative process [~~preparation, copying, or filing of the maps described by Subsection (a) and on file with the Texas Commission on Environmental Quality~~] does not affect:

(1) the organization, existence, or validity of the district;

(2) the right of the district to issue bonds; or

(3) the legality or operation of the district.

(d) The territory of the district does not include and the district does not have jurisdiction over land that has never been in the service area of the corporation regardless of any erroneous inclusion of that land in the boundaries and field notes in Section 9.12 of the Act enacted by the 80th Legislature, Regular Session, 2007, amending this section.

SECTION 9.05. Section 7201.021, Special District Local Laws Code, is amended by amending Subsections (a), (b), and (d) and adding Subsection (f) to read as follows:

(a) Except as provided by this subsection, after the appointment of initial directors under Section 7201.051, the receiver for the corporation [~~On the effective date of the Act enacting this chapter, the corporation~~] shall transfer the assets, debts, and contractual rights and obligations of the corporation, including all legal claims against the corporation in effect on the date of the transfer, to the district and provide notices and make recordings of the transfer required by the Water Code and general

law. If the transfer of any debt requires the permission of the lender, the receiver shall initiate proceedings to obtain that permission.

(b) In accordance with the orders of the receivership court and not [~~Not~~] later than the 30th day after the date of the transfer under Subsection (a), the receiver for [~~board of directors of~~] the corporation shall commence dissolution proceedings of the corporation.

(d) The receiver for [~~board of directors of~~] the corporation shall notify the Texas Commission on Environmental Quality of the dissolution of the corporation and its succession in interest by [~~the creation of~~] the district in order [~~to replace it~~] to effect the transfer of Certificates of Convenience and Necessity Nos. 10559 and 20785 to the district.

(f) After the Texas Commission on Environmental Quality takes the action required by Subsection (e), the court shall terminate the receivership.

SECTION 9.06. Section 7201.022, Special District Local Laws Code, is amended to read as follows:

Sec. 7201.022. EXPIRATION OF SUBCHAPTER. This subchapter expires September 1, 2012 [~~2008~~].

SECTION 9.07. Section 7201.051, Special District Local Laws Code, is amended to read as follows:

Sec. 7201.051. APPOINTMENT OF INITIAL [~~TEMPORARY~~] DIRECTORS. (a) As soon as practicable after the effective date of the Act enacted by the 80th Legislature, Regular Session, 2007, amending this section, seven initial directors shall be appointed

as provided by this section [~~The directors of the corporation who hold office on the effective date of the Act enacting this chapter shall serve as the temporary directors of the district until successor directors are elected and qualify for office~~].

(b) To be eligible to be appointed as an initial director, an individual must meet the same requirements as a candidate for an elected position as director under Section 7201.052. The initial directors shall be appointed as follows:

(1) one director to represent the residents of the district in the City of Mission appointed by the governing body of that city;

(2) one director to represent the residents of the district in the City of Palmview appointed by the governing body of that city;

(3) one director to represent the residents of the district in the City of Penitas appointed by the governing body of that city;

(4) one director to represent the residents of the district in the City of Sullivan City appointed by the governing body of that city; and

(5) three directors to represent the residents of the district outside the municipalities listed in Subdivisions (1)-(4) appointed by the Hidalgo County Commissioners Court [~~The temporary directors of the district are assigned position numbers as follows:~~

[~~(1) Position 1, Jose Luis Trigo;~~

[~~(2) Position 2, Jose Guadalupe Reyna;~~

[~~(3) Position 3, George Barreiro;~~

[~~(4) Position 4, Frolian Ramirez;~~

[~~(5) Position 5, Russell Wicker;~~

[~~(6) Position 6, Benito Salinas;~~

[~~(7) Position 7, Manuel Ricardo Garcia;~~

[~~(8) Position 8, Valente Alaniz, Jr.; and~~

[~~(9) Position 9, Juan Lino Garza~~].

(c) An initial director serves a term that expires on June 1 of the year in which the director's successor is elected under Section 7201.052 [~~If there is a vacancy on the temporary board of directors of the district, the temporary board shall appoint a person to fill the vacancy for the remainder of the term for the vacated position until the applicable election under Section 7201.052~~].

SECTION 9.08. Subchapter B, Chapter 7201, Special District Local Laws Code, is amended by adding Sections 7201.0512 and 7201.0513 to read as follows:

Sec. 7201.0512. INITIAL BOARD TRAINING. (a) Not later than the 60th day after the first date on which all of the initial directors have been appointed, each initial director shall complete at least 12 hours of training on district management and compliance with laws applicable to the district as determined by the receiver for the corporation.

(b) The district shall reimburse an initial director for the reasonable expenses incurred by the director in attending the training.

Sec. 7201.0513. EDUCATION PROGRAM. (a) Before the first election of directors under Section 7201.052, the initial board

shall establish a program of education for directors that includes information on:

(1) the history of the district;

(2) the district's enabling legislation;

(3) Chapters 49 and 65, Water Code, and other laws that apply to the district, including the requirements of the:

(A) open meetings law, Chapter 551, Government Code; and

(B) public information law, Chapter 552, Government Code;

(4) relevant legal developments related to water district governance;

(5) the duties and responsibilities of the board;

(6) the requirements of conflict of interest laws and other laws relating to public officials; and

(7) any applicable ethics policies adopted by the Texas Commission on Environmental Quality or the Texas Ethics Commission.

(b) The district shall pay any costs associated with the development of the education program from district revenue.

(c) The education program may include training provided by an organization offering courses that have been approved by the Texas Commission on Environmental Quality.

(d) The board may adopt bylaws modifying the education program as necessary to meet district needs.

SECTION 9.09. Section 7201.052, Special District Local Laws Code, is amended to read as follows:

Sec. 7201.052. BOARD OF DIRECTORS. (a) Except as provided by Subsection (l), the [~~The~~] district shall be governed by a board of seven [~~not fewer than nine and not more than 11~~] directors, elected as follows:

(1) one director elected by the voters of the part of the City of Mission inside the district to represent that part of the city;

(2) one director elected by the voters of the City of Palmview to represent that city;

(3) one director elected by the voters of the City of Penitas to represent that city;

(4) one director elected by the voters of the City of Sullivan City to represent that city; and

(5) three directors elected at-large to numbered positions on the board by the district voters who do not reside in any of the municipalities listed in Subdivisions (1)-(4) to represent the part of the district that is not included in those municipalities, unless the number of at-large directors is increased under Subsection (l) [~~in accordance with Section 49.103, Water Code, notwithstanding Subsection (f)(2) of that section~~].

(b) A [~~Except for a temporary director under Section 7201.051, a~~] candidate for one of the numbered [~~a position as~~] director positions:

(1) [~~is elected at large to represent the entire service area of the district;~~

[~~(2)~~] must reside in the part of the service area of the district that is not included in any of the municipalities

listed in Subsections (a)(1)-(4); and

(2) [~~(3)~~] must be eligible to hold office under Section 141.001, Election Code.

(c) A candidate for one of the director positions representing a municipality listed in Subsection (a)(1), (2), (3), or (4):

(1) must reside in the municipality the candidate seeks to represent; and

(2) must be eligible to hold office under Section 141.001, Election Code.

(d) It is the policy of the district that the directors shall represent and reside in as broad a cross-section of the geographic area of the district as possible.

(e) [~~(d)~~] The district shall fill a vacancy on the board in accordance with Section 49.105, Water Code.

(f) [~~(e)~~] Except for the initial [~~temporary~~] directors appointed [~~listed~~] under Section 7201.051 or elected at the first election under Subsection (g), directors serve staggered terms of four [~~three~~] years.

(g) [~~(f)~~] On the uniform election date in May 2008, or in May 2010, if the election is postponed under Subsection (h), the district shall hold an election to elect seven directors. On the [~~2006, and on that~~] uniform election date in May of each even-numbered [~~every third~~] year after that date, the district shall hold an election to elect the appropriate number of [~~three~~] directors [~~to serve in positions 1, 4, and 7~~].

(h) The initial board by order may postpone until the

uniform election date in May 2010 the first election for directors under Subsection (g) if the initial board determines that there is not sufficient time to comply with the requirements of law and to order the election of directors to be held on the first uniform election date specified by that subsection.

(i) The directors elected at the first election under Subsection (g) shall cast lots to determine which three directors shall serve terms expiring June 1 of the first even-numbered year after the year in which the directors are elected and which four directors shall serve terms expiring June 1 of the second even-numbered year after the year in which the directors are elected.

(j) A director may not serve consecutive terms.

(k) A person who has served as a member of the board of directors of the corporation is not eligible to serve as a district director.

(l) If, before the expiration of the term of a director elected to represent a municipality under Subsection (a)(1), (2), (3), or (4), the district determines that all of the incorporated territory of the municipality is outside the boundaries of the district, the position immediately becomes an at-large numbered position to be filled at the next general election of the district in accordance with Subsections (a)(5) and (b) [~~(g) On the uniform election date in May 2007, and on that uniform election date every third year after that date, the district shall hold an election to elect three directors to serve in positions 2, 3, and 5.~~

[~~(h) On the uniform election date in May 2008, and on that~~

~~uniform election date every third year after that date, the district shall hold an election to elect three directors to serve in positions 6, 8, and 9~~].

SECTION 9.10. Subchapter B, Chapter 7201, Special District Local Laws Code, is amended by adding Sections 7201.053 and 7201.054 to read as follows:

Sec. 7201.053. DISTRICT TREASURER. (a) The board shall elect from among its members one director to serve as district treasurer.

(b) The district treasurer shall comply with the training requirements provided by Section 49.1571, Water Code, for an investment officer of a district.

Sec. 7201.054. EDUCATION FOR DIRECTORS. (a) Except for an initial director whose term expires in 2008, each director shall complete the education program established under Section 7201.0513 before the first anniversary of the date on which the director was appointed or elected.

(b) The district shall reimburse a director for the reasonable expenses incurred by the director in attending the education program.

(c) A director who is elected to serve a subsequent term shall fulfill the education requirements specified by district bylaws.

SECTION 9.11. Section 7201.206, Special District Local Laws Code, is amended to read as follows:

Sec. 7201.206. RATES AND FEES FOR SERVICES. (a) The district, in connection with water or sewer retail public utility

services, shall establish lifeline, senior citizen, or minimum consumption level rates for services. The rate impact of such services shall be allocated on the basis of costs of services to achieve conservation principles, while securing necessary reserves for the payment of operating expenses, sinking funds, principal, interest, and debt coverage factors, and any other objective established by the district's annual budget.

(b) Chapter 395, Local Government Code, does not apply to any fee, charge, or assessment that, before the corporation's dissolution and conversion to a district, is adopted by the receiver for the purpose of generating revenue to fund or recoup the costs of capital improvements or facility expansions necessitated by and attributable to new developments.

(c) Notwithstanding Subsection (b), beginning on December 31, 2009, the district may not impose any fee, charge, or assessment that, before the corporation's dissolution and conversion to a district, is adopted by the receiver for the purpose of generating revenue to fund or recoup the costs of capital improvements or facility expansions necessitated by and attributable to new developments unless the district readopts the fee, charge, or assessment or adopts a new fee, charge, or assessment in accordance with Chapter 395, Local Government Code. This subsection does not apply to a retail water or sewer rate adopted by the receiver or the district.

SECTION 9.12. (a) Except for the areas excluded under Subsection (b) of this section, the boundaries of the Agua Special Utility District are as follows:

Beginning at a point in the centerline of FM 495 (Mile 1 Road) a distance of approximately .18 miles west of the intersection of FM 495 and Inspiration Road.

Thence due north approximately 1.0 miles to a point approximately 166 feet south of the centerline of Mile 2 Road and approximately .18 miles west of the intersection of Mile 2 Road and Inspiration Road

Thence follow west along a straight westerly line approximately 180 feet south of Mile 2 Road approximately .51 miles to a point in the centerline of Schubach Road.

Following westerly in a straight line approximately .78 miles to the centerline of Bentsen Palm Drive.

From the point at the centerline of Bentsen Palm Road continue westerly approximately .78 miles to a point at 26 15 00 latitude and -98 22 10 longitude.

Turn right and due north and follow approximately 7.0 miles in a northerly direction .10 miles west and parallel to Bentsen Palm Drive to a point at 226 21 04 latitude and -98 21 06 longitude.

Turn left and follow westerly along a straight line a distance of approximately 1.66 miles to the intersection of Abram Road and 9 Mile Road.

Follow along the centerline of 9 Mile Road westerly approximately 1.65 miles to its intersection with Iowa Avenue. (Latitude: 26 21 31, Longitude: -98 24 16)

Continue westerly along a straight line from latitude 26 21 31, longitude -98 24 16 approximately 3.79 miles to the center line of FM 2221 (Jara Chinas Road)

Thence due south along FM 2221 (Jara Chinas Road) approximate distance of 8.02 Miles to a point approximately .75 miles north of the Intersection of Expressway 83 and FM 2221(Jara Chinas Road)

Thence at a distance of approximately .75 miles north of the centerline of Expressway 83 due west to northwest approximately 4 miles following along the same contour as Expressway 83 to the centerline of El Faro Road from a point .62 miles east of the intersection of El Faro Road and Expressway 83.

Turn right and follow due north down the centerline of El Faro Road until its end and continue northerly for a total of approximately 2.79 miles to a point at latitude 26 19 13 and longitude -98 32 40.

Turn left and follow northwesterly in a straight line along the east side of 16 Mile Road (Starr County) approximately 1.87 miles to a point located at 26 19 30 latitude and -98 34 27 longitude.

Turn right and follow northeasterly in a straight line approximately 1.02 miles to a point located at 26 20 22 latitude and -98 34 17 longitude.

Turn right and follow southeasterly in a straight line approximately 1.26 miles to a point located at 26 20 22 latitude and -98 33 05 longitude.

Turn right and follow northeasterly in a straight line along the west side of County Line Road (Starr County) approximately .61 miles to a point located at 26 20 43 latitude and -98 32 60 longitude.

Turn left and follow northwesterly in a straight line approximately 1.26 miles to a point located at 26 20 53 latitude and -98 34 12 longitude.

Turn right and follow northeasterly in a straight line along the east side of 16 Mile Road (Starr County) approximately 1.32 miles to a point located at 26 22 02 latitude and -98 33 59 longitude.

Turn left and follow northwesterly in a straight line approximately .55 miles to a point located at 26 22 07 latitude and -98 34 30 longitude.

Turn left and follow southwesterly in a straight line approximately 6.17 miles to a point located at 26 16 48 latitude and -98 35 29 longitude.

Turn left and follow southeasterly in a straight line approximately .91 miles to a point located at 26 16 30 latitude and -98 34 40 longitude, near the Hidalgo-Starr County line.

Turn right and follow southwesterly along the Hidalgo-Starr County line approximately 1.28 miles to its intersection with the Rio Grande River (U.S. side).

Thence due south approximately 7.77 miles to the northern winding banks (U.S. side) of the Rio Grande River

Thence east along the northern winding banks (US side) of the Rio Grande River approximately 22 miles to a point approximately 1.16 miles south of Greene Road

Thence from that center line on Bentsen Park Road approximately .82 miles east northeast to the centerline of Breyfogle/Shuerbach Road

Turn left and follow westerly in a straight line approximately .56 miles to a point located 26 11 20 latitude and -98 22 30 longitude.

Turn left and follow southerly in a straight line approximately .50 miles to the centerline of Miltary Road.

Turn right and follow northerly and then northwesterly along the north side of Military Road approximately .36 miles to its intersection with Farm-to-Market Road 2062.

Turn left and follow southerly along Farm-to-Market Road 2062 approximately .16 miles to a point located at 26 11 02 latitude and -98 22 46 longitude.

Turn right and follow northerly, westerly, southerly, southwesterly, northerly, westerly and then southwesterly for approximately 1.27 miles to a point located at 26 11 11 latitude and -98 23 38 longitude running just north of Park Road 43.

Turn right and follow northeasterly along a straight line for approximately .71 miles to the north side of Military Road.

Turn left and follow along westerly approximately .44 miles along the north side of Military Road to its intersection with Goodwin Road.

Turn right and follow northerly along the centerline of Goodwin Road approximately .33 miles to a point located at 26 12 07 latitude and -98 23 53 longitude.

Turn right and follow easterly, northerly, easterly and then southeasterly approximately .78 miles to the intersection with Green Road.

Turn left and follow northerly along the centerline of Green

Road approximately .32 miles.

Turn right and follow easterly and then southwesterly approximately 1.16 miles to the north side of Military Road at points 26 11 42 latitude and -98 23 16 longitude.

Turn left and follow southeasterly along the north side of Military Road approximately 0.07 miles to a point located at 26 11 40 latitude and -98 23 13 longitude.

Turn left and follow northeasterly, northerly, northeasterly, northerly, northeasterly, easterly, southerly and then easterly approximately 2.04 miles to the centerline of Shuebach Road/Airfield Road

Turn left and follow northeasterly along the centerline of Airfield Road approximately 1.48 miles to its intersection with U.S. Highway 83 Business.

Turn right and follow easterly along the centerline of U.S. Highway 83 Business approximately .27 miles to its intersection with Moorefield Road.

Turn left and follow northerly along the centerline of Moorefield Road approximately .32 miles to a point located at 26 13 23 latitude and -98 21 21 longitude.

Make a slight right and follow northeasterly and then northerly along the west banks of the Edinburg Main Canal approximately .66 miles to that point on the centerline of FM 495 the beginning (Mile 1 Road) a distance of approximately .18 miles west of the intersection of FM 495 and Inspiration Road to Close.

(b) The territory of the Agua Special Utility District does not include the area within the city limits of La Joya, Texas, as it

existed on January 1, 1991; the area within the Certificate of Convenience and Necessity of Hidalgo County Municipal Utility District No. 1 as reflected on the records of the Texas Commission on Environmental Quality as of January 1, 2007; and the area within the following boundary lines, which lie wholly within the district:

Beginning at a point located at 26 14 57 Latitude and -98 25 55 Longitude follow in a northwesterly direction along an unnamed creek approximately .23 Miles to a point located at 26 15 03 Latitude and -98 26 05 Longitude.

From the point located at 26 15 03 Latitude and -98 26 05 Longitude follow in a westerly direction along an unnamed creek approximately .24 Miles to a point located at 26 15 04 Latitude and -98 26 19 Longitude.

From the point located at 26 15 04 Latitude and -98 26 19 Longitude turn right and follow in a straight line northeasterly approximately .97 Miles to a point located at 26 15 54 Latitude and -98 26 09 Longitude.

From the point located at 26 15 54 Latitude and -98 26 09 Longitude turn right and follow in a straight line easterly-southeasterly approximately .43 Miles to a point located at 26 15 50 Latitude and -98 25 45 Longitude.

From a point located at 26 15 50 Latitude and -98 25 45 Longitude turn right and follow in a straight line southwesterly approximately 1.03 Miles to a point located at 26 14 57 Latitude and -98 25 55 Longitude and Place of Beginning.

SECTION 9.13. Initial directors of the board of the Agua Special Utility District shall be appointed in accordance with

Section 7201.051, Special District Local Laws Code, as amended by this Act, as soon as practicable after the effective date of this Act.

SECTION 9.14. Except as otherwise provided by Chapter 7201, Special District Local Laws Code, as amended by this Act, the Agua Special Utility District is subject to:

(1) any judicial or administrative order imposing an injunction against the La Joya Water Supply Corporation that is in effect on the date of the transfer under Section 7201.021, Special District Local Laws Code, as amended by this Act; or

(2) any judicial or administrative order imposing liability for monetary damages or a civil or administrative penalty against the La Joya Water Supply Corporation that:

(A) results from a legal proceeding that is pending on the date of the transfer under Section 7201.021, Special District Local Laws Code, as amended by this Act; or

(B) is unsatisfied on the date of the transfer under Section 7201.021, Special District Local Laws Code, as amended by this Act.

SECTION 9.15. (a) The legal notice of the intention to introduce the article of this Act that amends Chapter 7201, Special District Local Laws Code, setting forth the general substance of the article, has been published as provided by law, and the notice and a copy of the article have been furnished to all persons, agencies, officials, or entities to which they are required to be furnished under Section 59, Article XVI, Texas Constitution, and Chapter 313, Government Code.

(b) The governor has submitted the notice and article to the Texas Commission on Environmental Quality.

(c) The Texas Commission on Environmental Quality has filed its recommendations relating to this article with the governor, lieutenant governor, and speaker of the house of representatives within the required time.

(d) All requirements of the constitution and laws of this state and the rules and procedures of the legislature with respect to the notice, introduction, and passage of this article are fulfilled and accomplished.

SECTION 9.16. This article takes effect immediately if this Act receives a vote of two-thirds of all the members elected to each house, as provided by Section 39, Article III, Texas Constitution. If this Act does not receive the vote necessary for immediate effect, this article takes effect September 1, 2007.

ARTICLE 10. TRUE RANCH MUNICIPAL UTILITY DISTRICT NO. 1

SECTION 10.01. Subtitle F, Title 6, Special District Local Laws Code, is amended by adding Chapter 8269 to read as follows:

CHAPTER 8269. TRUE RANCH MUNICIPAL UTILITY DISTRICT NO. 1

SUBCHAPTER A. GENERAL PROVISIONS

Sec. 8269.001. DEFINITIONS. In this chapter:

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

(2) "Director" means a board member.

(3) "District" means the True Ranch Municipal Utility District No. 1.

Sec. 8269.002. NATURE OF DISTRICT. The district is a

municipal utility district in Hays County created under and essential to accomplish the purposes of Section 59, Article XVI, Texas Constitution.

Sec. 8269.003. CONFIRMATION ELECTION REQUIRED. If the creation of the district is not confirmed at a confirmation election held under Section 8269.023 before September 1, 2012:

(1) the district is dissolved September 1, 2012, except that:

(A) any debts incurred shall be paid;

(B) any assets that remain after the payment of debts shall be transferred to Hays County; and

(C) the organization of the district shall be maintained until all debts are paid and remaining assets are transferred; and

(2) this chapter expires September 1, 2015.

Sec. 8269.004. FINDINGS OF BENEFIT AND PUBLIC PURPOSE. (a) All land and other property in the district will benefit from the works and projects to be accomplished by the district under powers conferred by Section 59, Article XVI, Texas Constitution.

(b) The district is created to serve a public use and benefit.

Sec. 8269.005. INITIAL DISTRICT TERRITORY. (a) The district is initially composed of the territory described by Section 10.02 of the Act creating this chapter.

(b) The boundaries and field notes contained in Section 10.02 of the Act creating this chapter form a closure. A mistake made in the field notes or in copying the field notes in the

legislative process does not affect:

(1) the organization, existence, or validity of the district;

(2) the right of the district to impose taxes;

(3) the right of the district to issue bonds, notes, or other indebtedness or to pay the principal of and interest on a bond;

(4) the validity of the district's bonds, notes, or other indebtedness; or

(5) the legality or operation of the district or the board.

[Sections 8269.006-8269.020 reserved for expansion]

SUBCHAPTER A-1. TEMPORARY PROVISIONS

Sec. 8269.021. TEMPORARY DIRECTORS. (a) On or after September 1, 2007, a person who owns land in the district may submit a petition to the Texas Commission on Environmental Quality requesting that the commission appoint as temporary directors the five persons named in the petition.

(b) The commission shall appoint as temporary directors the five persons named in the first petition received by the commission under Subsection (a).

(c) If a temporary director fails to qualify for office or if a vacancy occurs in the office of temporary director, the vacancy shall be filled as provided by Section 49.105, Water Code.

(d) Temporary directors serve until the earlier of:

(1) the date directors are elected under Section 8269.023; or

(2) the date this chapter expires under Section 8269.003.

Sec. 8269.022. ORGANIZATIONAL MEETING OF TEMPORARY DIRECTORS. As soon as practicable after all the temporary directors have qualified under Section 49.055, Water Code, the directors shall meet at a location in the district agreeable to a majority of the directors. If a location cannot be agreed upon, the meeting shall be at the Hays County Courthouse. At the meeting, the temporary directors shall elect officers from among the temporary directors and conduct any other district business.

Sec. 8269.023. CONFIRMATION AND INITIAL DIRECTORS' ELECTION. (a) The temporary directors shall hold an election to confirm the creation of the district and to elect five directors as provided by Section 49.102, Water Code.

(b) Section 41.001(a), Election Code, does not apply to a confirmation and initial directors' election held under this section.

Sec. 8269.024. INITIAL ELECTED DIRECTORS; TERMS. The directors elected under Section 8269.023 shall draw lots to determine which two serve until the first regularly scheduled election of directors under Section 8269.052 and which three shall serve until the second regularly scheduled election of directors.

Sec. 8269.025. DATE OF FIRST REGULARLY SCHEDULED ELECTION OF DIRECTORS. The board by order may postpone the first election under Section 8269.052 following the confirmation and initial directors' election held under Section 8269.023 if:

(1) the election would otherwise occur not later than

the 60th day after the date on which the confirmation election is held; or

(2) the board determines that there is not sufficient time to comply with the requirements of law and to order the election.

Sec. 8269.026. EXPIRATION OF SUBCHAPTER. This subchapter expires September 1, 2015.

[Sections 8269.027-8269.050 reserved for expansion]

SUBCHAPTER B. BOARD OF DIRECTORS

Sec. 8269.051. DIRECTORS; TERMS. (a) The district is governed by a board of five directors.

(b) Directors serve staggered four-year terms.

Sec. 8269.052. ELECTION OF DIRECTORS. On the uniform election date in May of each even-numbered year, the appropriate number of directors shall be elected.

[Sections 8269.053-8269.100 reserved for expansion]

SUBCHAPTER C. POWERS AND DUTIES

Sec. 8269.101. GENERAL POWERS AND DUTIES. The district has the powers and duties necessary to accomplish the purposes for which the district is created.

Sec. 8269.102. MUNICIPAL UTILITY DISTRICT POWERS AND DUTIES. The district has the powers and duties provided by the general law of this state, including Chapters 49 and 54, Water Code, applicable to municipal utility districts created under Section 59, Article XVI, Texas Constitution.

Sec. 8269.103. ROAD PROJECTS. (a) To the extent authorized by Section 52, Article III, Texas Constitution, the

district may construct, acquire, improve, maintain, or operate arterials or main feeder roads or improvements in aid of those roads.

(b) A road project must meet all applicable construction standards, zoning and subdivision requirements, and regulatory ordinances of the municipality or county in whose jurisdiction the district is located.

Sec. 8269.104. COMPLIANCE WITH MUNICIPAL CONSENT ORDINANCES OR RESOLUTIONS. Subject to the limitations of Section 54.016, Water Code, the district shall comply with all valid and applicable requirements of any ordinance or resolution adopted by a municipality in the corporate limits or extraterritorial jurisdiction of which the district is located, including an ordinance or resolution adopted before September 1, 2007, that consents to the creation of the district or to the inclusion of lands within the district.

[Sections 8269.105-8269.150 reserved for expansion]

SUBCHAPTER D. GENERAL FINANCIAL PROVISIONS

Sec. 8269.151. ELECTIONS REGARDING TAXES OR BONDS. (a) Except as provided by Section 8269.201(b), the district may issue, without an election, bonds and other obligations secured by revenue or contract payments from any source other than ad valorem taxation.

(b) The district must hold an election in the manner provided by Chapters 49 and 54, Water Code, to obtain voter approval before the district may impose an operation and maintenance tax or issue bonds payable from ad valorem taxes.

Sec. 8269.152. OPERATION AND MAINTENANCE TAX. (a) If authorized at an election held under Section 8269.151, the district may impose an operation and maintenance tax on taxable property in the district in accordance with Section 49.107, Water Code.

(b) The board shall determine the tax rate. The rate may not exceed the rate approved at the election.

[Sections 8269.153-8269.200 reserved for expansion]

SUBCHAPTER E. BONDS AND OTHER OBLIGATIONS

Sec. 8269.201. AUTHORITY TO ISSUE BONDS AND OTHER OBLIGATIONS. (a) The district may issue bonds or other obligations payable wholly or partly from ad valorem taxes, impact fees, revenue, grants, or other district money, or any combination of those sources, to pay for any authorized district purpose.

(b) The district may not issue bonds to finance projects authorized by Section 8269.103 unless the issuance is approved by a vote of a two-thirds majority of the voters of the district voting at an election called for that purpose.

(c) Bonds or other obligations issued or incurred to finance projects authorized by Section 8269.103 may not exceed one-fourth of the assessed value of the real property in the district.

Sec. 8269.202. TAXES FOR BONDS. At the time bonds payable wholly or partly from ad valorem taxes are issued:

(1) the board shall impose a continuing direct annual ad valorem tax, without limit as to rate or amount, for each year that all or part of the bonds are outstanding; and

(2) the district annually shall impose an ad valorem tax on all taxable property in the district in an amount sufficient

to:

(A) pay the interest on the bonds as the interest becomes due;

(B) create a sinking fund for the payment of the principal of the bonds when due or the redemption price at any earlier required redemption date; and

(C) pay the expenses of imposing the taxes.

SECTION 10.02. The True Ranch Municipal Utility District No. 1 includes all the territory contained in the following area: BEING ALL THAT CERTAIN TRACT OR PARCEL OF LAND CONTAINING 465.71 ACRES, MORE OR LESS, OF LAND AREA IN THE JOHN INGRAIM SURVEY, ABSTRACT NO. 256, HAYS COUNTY, TEXAS, BEING A PORTION OF THAT TRACT DESCRIBED AS 1279.69 ACRES IN A DEED FROM LESLIE TRUE VESPER ET AL TO LESLIE TRUE VESPER DATED AUGUST 10, 1992 AND RECORDED IN VOLUME 948, PAGE 789 OF THE HAYS COUNTY OFFICIAL PUBLIC RECORDS, AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING at a ½" iron rod found in the southwest line of R.M. Highway No. 2325 and that tract described as an 80' R.O.W. in a deed from Cecil H. Hale, et al to the State of Texas dated August 29, 1956 and recorded in Volume 169, Page 304 of the Hays County Deed Records for the most northerly northwest corner of the panhandle portion of this description and the Vesper 1279.69 acre tract and east corner of that tract described as 592.30 acres in a deed from Leslie True Vesper et al to Ameritrust Texas, N.A., Trustee dated August 10, 1992 and recorded in Volume 949, Page 572 of the Hays County Official Public Records, from which a TXDOT concrete monument found bears N 69°45'42" W 162.75 feet;

THENCE leaving the Ameritrust Texas 592.30 acre tract and the PLACE OF BEGINNING as shown on that plat numbered 24587-06-3-d dated May 30, 2006 prepared for Leslie Vesper by Byrn & Associates, Inc., of San Marcos, Texas with the common northeast line of the Vesper 1279.69 acre tract and southwest line of R.M. Highway No. 2325 and the State of Texas 80' R.O.W. tract S 69°48'34" E 599.94 feet to a ½" iron rod set for the northwest corner of that tract described as "Tract 1-1.00 acres" in a deed from Thomas W. Slaughter et ux to Randy C. Brown et ux dated February 12, 1996 and recorded in Volume 1206, Page 780 of the Hays County Official Public Records, from which A TXDOT concrete monument found bears S 69°47'57" E 120.11 feet;

THENCE leaving R.M. Highway No. 2325 and the State of Texas 80' R.O.W. tract with the common east line of the Vesper 1279.69 acre tract and west and south lines of the Brown 1.00 acre Tract 1 the following two courses:

1. S 20°06'33" W 226.56 feet to a 2.5" pipe fence corner post found for corner, and

S 69°41'58" E 234.42 feet to a 2" pipe fence corner post found in the west line of that tract described as "Tract 2-5.347 acres" in the previously mentioned deed to Randy C. Brown et ux for the southeast comer of the Brown 1.00 acre Tract 1;

THENCE leaving the Brown 1.00 acre Tract 1 and continuing with the common east line of the Vesper 1279.69 acre tract and west line of the Brown 5.347 acre Tract 2, as fenced and used, the following three courses:

S 00°10'12" E 410.74 feet to a ½" iron rod set at the

approximate centerline of an underground pipeline for angle point,

S 00°04'22" E 196.11 feet to a 2.5" pipe fence post found for angle point, and

S 00°24'09" E 15.83 feet to an iron rod found with an aluminum cap stamped "Pro-Tech Eng" at fence corner for the southwest corner of the Brown 5.347 acre Tract 2 and northwest corner of the remaining portion of that tract described as 187.78 acres in a deed from Henry Polvado & Lillie Polvado to Wesley Springs dated May 6, 1983 and recorded in Volume 393, Page 570 of the Hays County Deed Records (the Brown 5.347 acre Tract 2 being a portion of the Springs 187.78 acre tract);

THENCE leaving the Brown 5.347 acre Tract 2 and continuing with the east line of the Vesper 1279.69 acre tract and west line of the Springs 187.78 acre tract, as fenced and used, the following three courses:

S 00°00'57" E 1012.24 feet to a 2.5" pipe fence post found for angle point,

S 00°06'57" W 908.05 feet to a 4" pipe fence corner post found for angle point, and

S 00°03'12" E 354.80 feet to a 4" pipe fence corner post found for the southwest corner of the springs 187.78 acre tract and northwest corner of that tract described as 126.97 acres in a deed from Stanual W. Farris to the Stanual W. Farris Living Trust dated March 10, 2005 and recorded in Volume 2646, Page 385 of the Hays County Official Public Records;

THENCE leaving the Springs 187.78 acre tract and continuing with the common east line of the Vesper 1279.69 acre tract and west

line of Farris Living Trust 126.97 acre tract, as fenced and used, the following three courses:

S 00°12'25" W 952.36 feet to a 4" pipe fence post found for angle point,

S 00°09'57"W 1087.12 feet to a 4" cedar post found for angle point, and

S 00°22'11" W 1072.11 feet to a ½" iron rod found at fence corner for the southwest corner of the Farris Living Trust 126.97 acre tract and northwest corner of that tract described as 32.03 acres in a deed from Phil Harris to Shannon Harris dated April 8, 1998 and recorded in Volume 1463, Page 335 of the Hays County Official Public Records;

THENCE leaving the Farris Living Trust 126.97 acre tract and continuing with the common east line of the Vesper 1279.69 acre tract and west line of the Shannon Harris 32.03 acre tract, as fenced and used, S 00°44'10"W 120.44 feet to a 4" cedar fence corner post found for the southwest corner of the Shannon Harris 32.03 acre tract and northwest corner of that tract described as 28.92 acres in a deed from A.J. Farris et ux to Philip D. Farris dated July 18, 1991 and recorded in Volume 882, page 620 of the Hays County Official Public Records;

THENCE leaving the Shannon Harris 32.03 acre tract and continuing with the common east line of the Vesper 1279.69 acre tract and west line of the Philip D. Farris 28.92 acre tract, as fenced and used, S 00°24'02" W 279.19 feet to a ½" iron rod found at fence corner for the southeast corner of this description and northeast corner of that tract described as 52.30 acres in a deed

from Leslie True Vesper to Paul R. Eastup et ux dated June 5, 1996 and recorded in Volume 1240, Page 309 of the Hays County Official Public Records (the Eastup 52.30 acre tract being a portion of the Vesper 1279.69 acre tract);

THENCE leaving the Phillip D. Farris 28.92 acre tract and entering the Vesper 1279.69 acre tract with the north line of the Eastup 52.30 acre tract, N 87°10'57" W 1356.38 feet to a ½" iron rod found in fence for the northwest corner of the Eastup 52.03 acre tract and northeast corner of that tract described as 209.16 acres in a deed from Leslie True Vesper to James Nicholas Edwards and Lynn S. Edwards dated July 6, 2005 and recorded in Volume 2719, Page 740 of the Hays County Official Public Record (the Edwards 209.16 acre tract being a portion of the Vesper 1279.69 acre tract);

THENCE leaving the Eastup 52.30 acre tract with the north line of the Edwards 209.16 acre tract, as fenced and used, the following five courses:

N 87°19'31" W 665.61 feet to a 4" pipe fence post found for angle point,

N 86°58'45" W 535.67 feet to a 3" cedar fence post found for angle point,

N 87°09'05" W 302.22 feet to a 3" cedar fence post found for angle point,

N 87°26'23" W 724.92 feet to a 4" cedar fence post found for angle point, and

N 86°46'01" W 426.90 feet to a ½" iron rod found with a plastic cap stamped "Byrn Survey" in the east line of that tract described as 504.13 acres in a deed from Leslie True Vesper to James L. Pierce

and David L. Pierce dated February 8, 1999 and recorded in Volume 1500, Page 452 of the Hays County Official Public Records (the Pierce 504.13 acre tract being a portion of the Vesper 1279.69 acre tract);

THENCE leaving the Edwards 209.16 acre tract with the east line of the Pierce 504.13 acre tract the following two courses:

N 08°19'22" E 124.79 feet to a ½" iron rod found with a plastic cap stamped "Byrn Survey" for corner, and

N 87°41'56" W 751.30 feet to a ½" iron rod found with a plastic cap stamped "Byrn Survey" for the southwest corner of this description, an interior corner in the east line of the Pierce 504.13 acre tract, and the south corner of that tract described as 10.59 acres in a deed from Leslie True Vesper to James L. Pierce and David L. Pierce dated June 15, 2001 and recorded in Volume 1872, Page 802 of the Hays County Official Public Records (the Pierce 10.59 acre tract being a portion of the Vesper 1279.69 acre tract);

THENCE leaving the Pierce 504.13 acre tract with the east line of Pierce 10.59 acre tract the following two courses:

N 05°37'42" E (being the bearing basis for description) 734.58 feet to a ½" iron rod found with a plastic cap stamped "Byrn Survey" for angle point, and

N 16°12'16" E 1026.26 feet to a 16" cedar tree stump found in fence in the east line of the previously mentioned Pierce 504.13 acre tract for the north corner of the Pierce 10.59 acre tract;

THENCE leaving the Pierce 10.59 acre tract and continuing with the east line of the Pierce 504.13 acre tract, as fenced and used, the following eight courses:

N 20°34'38" E 42.67 feet to a 16" cedar tree stump found for angle point,

N 15°43'09" E 241.85 feet to a 12" cedar tree stump found for angle point,

N 08°41'46" E 86.90 feet to a 14" cedar tree stump found for angle point,

N 07°33'58" E 244.38 feet to a 2.5" pipe fence post found for angle point,

N 24°14'46" E 623.77 feet to a 6" cedar fence post found for angle point,

N 24°15'46" E 420.45 feet to a 2.5" pipe fence post found for angle point,

N 12°52'45" E 194.02 feet to a 2.5" pipe fence post found for angle point, and

N 01°30'08" E 340.55 feet to a 4" pipe fence corner post found in the south line of the previously mentioned Ameritrust Texas 592.30 acre tract and north line of the Vesper 1279.69 acre tract for the northeast corner of the Pierce 504.13 acre tract and exterior west corner of this description;

THENCE leaving the Pierce 504.13 acre tract with the common north line of the Vesper 1279.69 acre tract, and south line of the Ameritrust Texas 592.30 acre tract, as fenced and used, the following six courses:

N 73°32'00" E 130.18 feet to a 4" pipe fence post found for angle point,

S 48°36'36" E 170.02 feet to a ½" iron rod found for angle point,

S 76°17'07" E 88.03 feet to a 4" pipe fence post found for angle point,

S 86°44'44" E 798.24 feet to a 4" pipe fence post found for angle point,

S 86°55'19" E 913.16 feet to a 4" pipe fence post found for angle point, and

S 86°56'50" E 421.51 feet to a ½" iron rod found for the southeast corner of the Ameritrust Texas 592.30 acre tract and southwest corner of the panhandle portion of this description and the Vesper 1279.69 acre tract;

THENCE leaving the fence with the common west line of the panhandle portion of the Vesper 1279.69 acre tract and east line of the Ameritrust Texas 592.30 acre tract the following two courses:

N 00°00'32" E 1999.62 feet to a ½" iron rod found for angle point, and

N 32°23'54" E 1152.96 feet to the PLACE OF BEGINNING.

THERE are contained within these metes and bounds 465.71 acres, more or less, as prepared from public records and surveys made on the ground in 1999, 2001, 2005 and on May 30, 2006 by Byrn & Associates, Inc., of San Marcos, Texas. All ½" iron rods set are capped with a plastic cap stamped "Byrn Survey".

SECTION 10.03. (a) The legal notice of the intention to introduce this article, setting forth the general substance of this article, has been published as provided by law, and the notice and a copy of this article have been furnished to all persons, agencies, officials, or entities to which they are required to be furnished under Section 59, Article XVI, Texas Constitution, and Chapter 313,

Government Code.

(b) The governor, one of the required recipients, has submitted the notice and article to the Texas Commission on Environmental Quality.

(c) The Texas Commission on Environmental Quality has filed its recommendations relating to this article with the governor, the lieutenant governor, and the speaker of the house of representatives within the required time.

(d) All requirements of the constitution and laws of this state and the rules and procedures of the legislature with respect to the notice, introduction, and passage of this article are fulfilled and accomplished.

SECTION 10.04. This article takes effect immediately if this Act receives a vote of two-thirds of all the members elected to each house, as provided by Section 39, Article III, Texas Constitution. If this Act does not receive the vote necessary for immediate effect, this article takes effect September 1, 2007.

ARTICLE 11. TABLEROCK GROUNDWATER CONSERVATION DISTRICT

SECTION 11.01. Subtitle H, Title 6, Special District Local Laws Code, is amended by adding Chapter 8823 to read as follows:

CHAPTER 8823. TABLEROCK GROUNDWATER CONSERVATION DISTRICT

SUBCHAPTER A. GENERAL PROVISIONS

Sec. 8823.001. DEFINITIONS. In this chapter:

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

(2) "Director" means a board member.

(3) "District" means the Tablerock Groundwater Conservation District.

Sec. 8823.002. NATURE OF DISTRICT. The district is a groundwater conservation district in Coryell County created under and essential to accomplish the purposes of Section 59, Article XVI, Texas Constitution.

Sec. 8823.003. CONFIRMATION ELECTION REQUIRED. (a) If the creation of the district is not confirmed at a confirmation election held before September 1, 2012:

(1) the district is dissolved on September 1, 2012, except that the district shall:

(A) pay any debts incurred;

(B) transfer to Coryell County any assets that remain after the payment of debts; and

(C) maintain the organization of the district until all debts are paid and remaining assets are transferred; and

(2) this chapter expires September 1, 2012.

(b) This section expires September 1, 2012.

Sec. 8823.004. INITIAL DISTRICT TERRITORY. The initial boundaries of the district are coextensive with the boundaries of Coryell County, Texas.

Sec. 8823.005. CONSTRUCTION OF CHAPTER. This chapter shall be liberally construed to achieve the legislative intent and purposes of Chapter 36, Water Code. A power granted by Chapter 36, Water Code, or this chapter shall be broadly interpreted to achieve that intent and those purposes.

Sec. 8823.006. APPLICABILITY OF OTHER GROUNDWATER CONSERVATION DISTRICT LAW. Except as otherwise provided by this chapter, Chapter 36, Water Code, applies to the district.

[Sections 8823.007-8823.020 reserved for expansion]

SUBCHAPTER A-1. TEMPORARY PROVISIONS

Sec. 8823.021. APPOINTMENT OF TEMPORARY DIRECTORS. (a) Not later than the 45th day after the effective date of this chapter, five temporary directors shall be appointed as follows:

(1) the Coryell County Commissioners Court shall appoint one temporary director from each of the four commissioners precincts in the county to represent the precincts in which the temporary directors reside; and

(2) the county judge of Coryell County shall appoint one temporary director who resides in the district to represent the district at large.

(b) If there is a vacancy on the temporary board, the authority who appointed the temporary director whose position is vacant shall appoint a person to fill the vacancy.

(c) Temporary directors serve until the earlier of:

(1) the time the temporary directors become initial directors as provided by Section 8823.024; or

(2) the date this chapter expires under Section 8823.003.

Sec. 8823.022. ORGANIZATIONAL MEETING OF TEMPORARY DIRECTORS. As soon as practicable after all the temporary directors have qualified under Section 36.055, Water Code, a majority of the temporary directors shall convene the organizational meeting of the district at a location within the district agreeable to a majority of the directors. If an agreement on location cannot be reached, the organizational meeting shall be

at the Coryell County Courthouse.

Sec. 8823.023. CONFIRMATION ELECTION. (a) The temporary directors shall hold an election to confirm the creation of the district.

(b) Section 41.001(a), Election Code, does not apply to a confirmation election held as provided by this section.

(c) Except as provided by this section, a confirmation election must be conducted as provided by Sections 36.017(b), (c), and (e)-(i), Water Code, and the Election Code. Section 36.017(d), Water Code, does not apply to the confirmation election.

(d) The ballot for the election must be printed in accordance with the Election Code and provide for voting for or against the proposition: "The creation of the Tablerock Groundwater Conservation District and the imposition of a maintenance tax at a rate not to exceed two cents on each $100 of assessed valuation of taxable property in the district."

(e) If a majority of the votes cast at the election are not in favor of the creation of the district, the temporary directors may hold a subsequent confirmation election. The subsequent election may not be held before the first anniversary of the date on which the previous election was held.

(f) The district may not impose a maintenance tax unless a majority of the votes cast at the election are in favor of the imposition of the maintenance tax.

Sec. 8823.024. INITIAL DIRECTORS. (a) If creation of the district is confirmed at an election held under Section 8823.023, the temporary directors become the initial directors and serve for

the terms provided by Subsection (b).

(b) The initial directors representing commissioners precincts 2 and 4 serve until the election of directors under Section 8823.025, and the initial directors representing commissioners precincts 1 and 3 and the at-large director serve until the next regularly scheduled election of directors under Section 8823.053.

Sec. 8823.025. INITIAL ELECTION OF DIRECTORS. On the uniform election date in November of the first even-numbered year after the year in which the creation of the district is confirmed at an election held under Section 8823.023, the district shall hold an election of two directors to replace the initial directors who, under Section 8823.024(b), serve until that election.

Sec. 8823.026. EXPIRATION OF SUBCHAPTER. This subchapter expires September 1, 2012.

[Sections 8823.027-8823.050 reserved for expansion]

SUBCHAPTER B. BOARD OF DIRECTORS

Sec. 8823.051. DIRECTORS; TERMS. (a) The district is governed by a board of five directors.

(b) Directors serve staggered four-year terms.

Sec. 8823.052. METHOD OF ELECTING DIRECTORS. One director is elected from each county commissioners precinct in Coryell County and one director is elected at large.

Sec. 8823.053. ELECTION DATE. The district shall hold an election in the district to elect directors on the uniform election date in November of each even-numbered year.

Sec. 8823.054. QUALIFICATIONS FOR ELECTION. (a) To be

qualified for election as a director, a person must reside in the district.

(b) To be qualified for election as a director from a precinct, a person must reside in that precinct.

[Sections 8823.055-8823.100 reserved for expansion]

SUBCHAPTER C. POWERS AND DUTIES

Sec. 8823.101. GROUNDWATER CONSERVATION DISTRICT POWERS AND DUTIES. Except as provided by this chapter, the district has the powers and duties provided by the general law of this state, including Chapter 36, Water Code, and Section 59, Article XVI, Texas Constitution, applicable to groundwater conservation districts.

Sec. 8823.102. REGISTRATION AND REPORTING REQUIREMENTS FOR CERTAIN EXEMPT WELLS. The district may adopt rules that require the owner or operator of a well or class of wells exempt from permitting under Section 36.117, Water Code, to register the well with the district and, if the well is not exempt under Section 36.117(b)(1), Water Code, to report groundwater withdrawals from the well using reasonable and appropriate reporting methods and frequency.

Sec. 8823.103. WELL SPACING RULES; EXEMPTIONS. (a) Except as provided by Subsection (b), the district shall exempt from the well spacing requirements adopted by the district any well that is completed on or before the effective date of those requirements.

(b) The district may provide by rule that a well may lose its exemption under this section if the well is modified in a manner that substantially increases the capacity of the well after the effective date of the well spacing requirements adopted by the

district.

(c) Except as provided by this section, the district may require any well or class of wells exempt from permitting under Chapter 36, Water Code, to comply with the well spacing requirements adopted by the district. The district shall apply well spacing requirements uniformly to any well or class of wells based on the size or capacity of the well and without regard to the type of use of the groundwater produced by the well.

Sec. 8823.104. ADOPTION OF RULES AND ISSUANCE OF PERMITS. Before the district adopts a management plan, the district may adopt rules and issue permits.

Sec. 8823.105. CONTRACTS WITH OTHER GOVERNMENTAL ENTITIES. (a) The district and another governmental entity, including a river authority located in the district, may contract for the performance by that entity of a district function.

(b) The district may accept a loan from Coryell County to pay for any initial costs of the district, including costs related to a confirmation election.

Sec. 8823.106. NO EMINENT DOMAIN POWER. The district may not exercise the power of eminent domain.

Sec. 8823.107. DISTRICT TERRITORY REQUIREMENTS; DISSOLUTION OF DISTRICT. (a) On September 1, 2011, the district boundaries must include at least one county adjacent to Coryell County.

(b) As soon as practicable after September 1, 2011, the Texas Commission on Environmental Quality shall determine whether the district complies with Subsection (a).

(c) If the Texas Commission on Environmental Quality determines that the district does not comply with Subsection (a), the commission shall dissolve the district in accordance with Sections 36.304, 36.305, 36.307, 36.308, 36.309, and 36.310, Water Code, regardless of whether the district meets the criteria for dissolution under Section 36.304(a), Water Code.

(d) This section expires September 1, 2013.

[Sections 8823.108-8823.150 reserved for expansion]

SUBCHAPTER D. GENERAL FINANCIAL PROVISIONS

Sec. 8823.151. REVENUE. To pay the maintenance and operating costs of the district and to pay any bonds or notes issued by the district, the district may:

(1) impose an ad valorem tax at a rate that:

(A) is approved by a majority of district voters voting at an election held for that purpose; and

(B) does not exceed two cents on each $100 of assessed valuation of taxable property in the district;

(2) assess fees for services or for water withdrawn from nonexempt wells; or

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

[Sections 8823.152-8823.200 reserved for expansion]

SUBCHAPTER E. DISSOLUTION

Sec. 8823.201. ELECTION FOR DISSOLUTION. (a) If the district has no outstanding bond or other long-term indebtedness, the district may be dissolved by a favorable vote of a majority of the registered voters of the district at an election held for that

purpose.

(b) The board shall hold a dissolution election if the board receives a petition for dissolution signed by at least 50 percent of the registered voters in the district as computed by using the list of registered voters for Coryell County.

(c) If the district is dissolved under this section, the board shall:

(1) notify the Texas Commission on Environmental Quality and the secretary of state of the dissolution; and

(2) transfer title to any assets of the district to Coryell County.

SECTION 11.02. (a) The legal notice of the intention to introduce this article, setting forth the general substance of this article, has been published as provided by law, and the notice and a copy of this article have been furnished to all persons, agencies, officials, or entities to which they are required to be furnished under Section 59, Article XVI, Texas Constitution, and Chapter 313, Government Code.

(b) The governor has submitted the notice and article to the Texas Commission on Environmental Quality.

(c) The Texas Commission on Environmental Quality has filed its recommendations relating to this article with the governor, lieutenant governor, and speaker of the house of representatives within the required time.

(d) All requirements of the constitution and laws of this state and the rules and procedures of the legislature with respect to the notice, introduction, and passage of this article are

fulfilled and accomplished.

ARTICLE 12. EDWARDS AQUIFER AUTHORITY

SECTION 12.01. Section 1.11, Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993, is amended by amending Subsection (f) and adding Subsections (f-1) and (f-2) to read as follows:

(f) The authority may own, finance, design, [~~contract with a person who uses water from the aquifer for the authority or that person to~~] construct, operate, or [~~own, finance, and~~] maintain recharge [~~water supply~~] facilities. [~~Management fees or special fees may not be used for purchasing or operating these facilities.~~] For the purpose of this subsection, "recharge [~~water supply~~] facility" means [~~includes~~] a dam, reservoir, [~~treatment facility, transmission facility,~~] or other method of recharge project and associated facilities, structures, or works but does not include a facility to recirculate water at Comal or San Marcos Springs.

(f-1) The authority shall provide written notice of the intent to own, finance, design, construct, operate, or maintain recharge facilities to:

(1) each groundwater conservation district in the area in which the recharge facility will be located;

(2) the mayor of each municipality in the area in which the recharge facility will be located;

(3) the county judge of each county in the area in which the recharge facility will be located; and

(4) each member of the legislature who represents the area in which the proposed recharge facility will be located.

(f-2) Any entity within the county in which a recharge facility is to be constructed shall be provided opportunity for input and allowed to provide proposals for partnering with the authority to own, finance, design, construct, operate, or maintain the recharge facility.

SECTION 12.02. Subsections (a), (c), (e), (f), and (h), Section 1.14, Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993, are amended to read as follows:

(a) Authorizations to withdraw water from the aquifer and all authorizations and rights to make a withdrawal under this Act shall be limited in accordance with this section to:

(1) protect the water quality of the aquifer;

(2) protect the water quality of the surface streams to which the aquifer provides springflow;

(3) achieve water conservation;

(4) maximize the beneficial use of water available for withdrawal from the aquifer;

(5) recognize the extent of the hydro-geologic connection and interaction between surface water and groundwater;

(6) protect aquatic and wildlife habitat;

(7) [~~(6)~~] protect species that are designated as threatened or endangered under applicable federal or state law; and

(8) [~~(7)~~] provide for instream uses, bays, and estuaries.

(c) Except as provided by Subsections [~~(d),~~] (f)[~~,~~] and (h) of this section and Section 1.26 of this article, for the period beginning January 1, 2008, the amount of permitted withdrawals from

the aquifer may not exceed or be less than 572,000 [~~400,000~~] acre-feet of water for each calendar year, which is the sum of all regular permits issued or for which an application was filed and issuance was pending action by the authority as of January 1, 2005.

(e) The authority may not allow withdrawals from the aquifer through wells drilled after June 1, 1993, except for replacement, test, or exempt wells or to the extent that the authority approves an amendment to an initial regular permit to authorize a change in the point of withdrawal under that permit [~~additional water as provided by Subsection (d) and then on an interruptible basis~~].

(f) If the level of the aquifer is equal to or greater than 660 [~~650~~] feet above mean sea level as measured at Well J-17, the authority may authorize withdrawal from the San Antonio pool, on an uninterruptible basis, of permitted amounts. If the level of the aquifer is equal to or greater than 845 feet at Well J-27, the authority may authorize withdrawal from the Uvalde pool, on an uninterruptible basis, of permitted amounts. [~~The authority shall limit the additional withdrawals to ensure that springflows are not affected during critical drought conditions.~~]

(h) To accomplish the purposes of this article, [~~by June 1, 1994,~~] the authority, through a program, shall implement and enforce water management practices, procedures, and methods to ensure that, not later than December 31, 2012, the continuous minimum springflows of the Comal Springs and the San Marcos Springs are maintained to protect endangered and threatened species to the extent required by federal law and to achieve other purposes provided by Subsection (a) of this section and Section 1.26 of this

article. The authority from time to time as appropriate may revise the practices, procedures, and methods. To meet this requirement, the authority shall require:

(1) phased adjustments to [~~reductions in~~] the amount of water that may be used or withdrawn by existing users or categories of other users, including adjustments in accordance with the authority's critical period management plan established under Section 1.26 of this article; or

(2) implementation of alternative management practices, procedures, and methods.

SECTION 12.03. Subsection (g), Section 1.16, Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993, is amended to read as follows:

(g) The authority shall issue an initial regular permit without a term, and an initial regular permit remains in effect until the permit is abandoned or[~~,~~] cancelled[~~, or retired~~].

SECTION 12.04. Subsection (b), Section 1.19, Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993, is amended to read as follows:

(b) Withdrawal of water under a term permit must be consistent with the authority's critical period management plan established under Section 1.26 of this article. A holder of a term permit may not withdraw water from the San Antonio pool of the aquifer unless:

(1) the level of the aquifer is higher than 675 [~~665~~] feet above sea level, as measured at Well J-17;

(2) the flow at Comal Springs as determined by Section

1.26(c) of this article is greater than 350 cubic feet per second; and

(3) the flow at San Marcos Springs as determined by Section 1.26(c) of this article is greater than 200 cubic feet per second.

SECTION 12.05. Subsection (a), Section 1.22, Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993, is amended to read as follows:

(a) The authority may acquire permitted rights to use water from the aquifer for the purposes of:

(1) holding those rights in trust for sale or transfer of the water or the rights to persons within the authority's jurisdiction who may use water from the aquifer;

(2) holding those rights in trust as a means of managing overall demand on the aquifer; or

(3) holding those rights for resale [~~or retirement as a means of complying with pumping reduction requirements under this article; or~~

[~~(4) retiring those rights, including those rights already permitted~~].

SECTION 12.06. Article 1, Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993, is amended by amending Section 1.26 and adding Section 1.26A to read as follows:

Sec. 1.26. CRITICAL PERIOD MANAGEMENT PLAN. (a) After review of the recommendations received in the program document, as prescribed by Section 1.26A of this article, the [~~The~~] authority by rule shall adopt [~~prepare and coordinate implementation of~~] a [~~plan~~

~~for~~] critical period management plan consistent with Sections 1.14(a), (f), and (h) of this article [~~on or before September 1, 1995~~]. The critical period management plan shall be adopted by the authority no later than six months after the authority's receipt of the program document. On adoption of the critical period management plan, the authority shall provide a written report to the governor, lieutenant governor, and speaker of the house of representatives describing the actions taken in response to each recommendation and, for each recommendation not implemented, the reason it was not implemented. The plan [~~mechanisms~~] must:

(1) distinguish between discretionary use and nondiscretionary use;

(2) require reductions of all discretionary use to the maximum extent feasible;

(3) require utility pricing, to the maximum extent feasible, to limit discretionary use by the customers of water utilities; [~~and~~]

(4) require reduction of nondiscretionary use by permitted or contractual users, to the extent further reductions are necessary, in the reverse order of the following water use preferences:

(A) municipal, domestic, and livestock;

(B) industrial and crop irrigation;

(C) residential landscape irrigation;

(D) recreational and pleasure; and

(E) other uses that are authorized by law; and

(5) allow irrigation use to continue in order to

permit the user to complete the irrigation of a crop in progress.

(b) In this section, "MSL" means the elevation above mean sea level, measured in feet, of the surface of the water in a well, and "CFS" means cubic feet per second. Not later than January 1, 2008, the authority shall, by rule, adopt and enforce a critical period management plan with withdrawal reduction percentages in the amounts indicated in Tables 1 and 2 whether according to the index well levels or the Comal or San Marcos Springs flow as applicable, for a total in critical period Stage IV of 40 percent of the permitted withdrawals under Table 1 and 35 percent under Table 2:

TABLE 1

CRITICAL PERIOD WITHDRAWAL REDUCTION STAGES

FOR THE SAN ANTONIO POOL

Comal Springs Flow cfs	San Marcos Springs Flow cfs	Index Well J-17 Level MSL	Critical Period Stage	Withdrawal Reduction-San Antonio Pool
<225	<96	<660	I	20%
<200	<80	<650	II	30%
<150	N/A	<640	III	35%
<100	N/A	<630	IV	40%

TABLE 2

CRITICAL PERIOD WITHDRAWAL REDUCTION STAGES

FOR THE UVALDE POOL

Withdrawal Reduction-Uvalde Pool	Index Well J-27 Level MSL	Critical Period Stage
N/A	---	I
5%	<850	II
20%	<845	III
35%	<842	IV

(c) A change to a critical period stage with higher withdrawal reduction percentages is triggered if the 10-day average of daily springflows at the Comal Springs or the San Marcos Springs

or the 10-day average of daily aquifer levels at the J-17 Index Well drops below the lowest number of any of the trigger levels indicated in Table 1. A change to a critical period stage with lower withdrawal reduction percentages is triggered only when the 10-day average of daily springflows at the Comal Springs and the San Marcos Springs and the 10-day average of daily aquifer levels at the J-17 Index Well are all above the same stage trigger level. The authority may adjust the withdrawal percentages for Stage IV in Tables 1 and 2 if necessary in order to comply with Subsection (d) or (e) of this section.

(d) Beginning September 1, 2007, the authority may not require the volume of permitted withdrawals to be less than an annualized rate of 340,000 acre-feet, under critical period Stage IV.

(e) After January 1, 2013, the authority may not require the volume of permitted withdrawals to be less than an annualized rate of 320,000 acre-feet, under critical period Stage IV unless, after review and consideration of the recommendations provided under Section 1.26A of this article, the authority determines that a different volume of withdrawals is consistent with Sections 1.14(a), (f), and (h) of this article in maintaining protection for federally listed threatened and endangered species associated with the aquifer to the extent required by federal law.

(f) Notwithstanding Subsections (d) and (e) of this section, the authority may require further withdrawal reductions before reviewing and considering the recommendations provided under Section 1.26A of this article if the discharge of Comal

Springs or San Marcos Springs declines an additional 15 percent after Stage IV withdrawal reductions are imposed under Subsection (b) of this section. This subsection expires on the date that critical period management plan rules adopted by the authority based on the recommendations provided under Section 1.26A of this article take effect.

(g) Notwithstanding the existence of any stage of an interim or final critical period adopted by the authority under this section, a person authorized to withdraw groundwater from the aquifer for irrigation purposes shall, without regard to the withdrawal reductions prescribed for that stage, be allowed to finish a crop already planted in the calendar year during which the critical period is in effect.

Sec. 1.26A. DEVELOPMENT OF WITHDRAWAL REDUCTION LEVELS AND STAGES FOR CRITICAL PERIOD MANAGEMENT THROUGH RECOVERY IMPLEMENTATION PROGRAM. (a) The authority, with the assistance of Texas A&M University, shall cooperatively develop a recovery implementation program through a facilitated, consensus-based process that involves input from the United States Fish and Wildlife Service, other appropriate federal agencies, and all interested stakeholders, including those listed under Subsection (e)(1) of this section. The recovery implementation program shall be developed for the species that are:

(1) listed as threatened or endangered species under federal law; and

(2) associated with the aquifer.

(b) The authority shall enter into a memorandum of agreement

with the United States Fish and Wildlife Service, other appropriate federal agencies, the Texas Commission on Environmental Quality, the Parks and Wildlife Department, the Department of Agriculture, the Texas Water Development Board, and other stakeholders, not later than December 31, 2007, in order to develop a program document that may be in the form of a habitat conservation plan used in issuance of an incidental take permit as outlined in Subsection (d) of this section.

(c) The authority shall enter into an implementing agreement with the United States Fish and Wildlife Service, other appropriate federal agencies, the Texas Commission on Environmental Quality, the Parks and Wildlife Department, the Department of Agriculture, the Texas Water Development Board, and other stakeholders to develop a program document that may be in the form of a habitat conservation plan used in issuance of an incidental take permit as outlined in Subsection (d) of this section not later than December 31, 2009.

(d) The authority, the Texas Commission on Environmental Quality, the Parks and Wildlife Department, the Department of Agriculture, the Texas Water Development Board, and other stakeholders shall jointly prepare a program document that may be in the form of a habitat conservation plan used in issuance of an incidental take permit with the United States secretary of the interior, through the United States Fish and Wildlife Service and other appropriate federal agencies, under Section 4 or Section 6, Endangered Species Act of 1973 (16 U.S.C. Section 1533 or 1535), as applicable, based on the program developed under Subsection (a) of

this section. The program document shall:

(1) provide recommendations for withdrawal adjustments based on a combination of spring discharge rates of the San Marcos and Comal Springs and levels at the J-17 and J-27 wells during critical periods to ensure that federally listed, threatened, and endangered species associated with the Edwards Aquifer will be protected at all times, including throughout a repeat of the drought of record;

(2) include provisions to pursue cooperative and grant funding to the extent available from all state, federal, and other sources for eligible programs included in the cooperative agreement under Subsection (c) of this section, including funding for a program director; and

(3) be approved and executed by the authority, the Texas Commission on Environmental Quality, the Parks and Wildlife Department, the Department of Agriculture, the Texas Water Development Board, and the United States Fish and Wildlife Service not later than September 1, 2012, and the agreement shall take effect December 31, 2012.

(e) Texas A&M University shall assist in the creation of a steering committee to oversee and assist in the development of the cooperative agreement under Subsection (c) of this section. The steering committee must be created not later than September 30, 2007. The initial steering committee shall be composed of:

(1) a representative of each of the following entities, as appointed by the governing body of that entity:

(A) the Edwards Aquifer Authority;

(B) the Texas Commission on Environmental Quality;

(C) the Parks and Wildlife Department;

(D) the Department of Agriculture;

(E) the Texas Water Development Board;

(F) the San Antonio Water System;

(G) the Guadalupe-Blanco River Authority;

(H) the San Antonio River Authority;

(I) the South Central Texas Water Advisory Committee;

(J) Bexar County;

(K) CPS Energy; and

(L) Bexar Metropolitan Water District or its successor; and

(2) nine other persons who respectively must be:

(A) a representative of a holder of an initial regular permit issued to a retail public utility located west of Bexar County, to be appointed by the authority;

(B) a representative of a holder of an initial regular permit issued by the authority for industrial purposes, to be appointed by the authority;

(C) a representative of a holder of an industrial surface water right in the Guadalupe River Basin, to be appointed by the Texas Commission on Environmental Quality;

(D) a representative of a holder of a municipal surface water right in the Guadalupe River Basin, to be appointed by the Texas Commission on Environmental Quality;

(E) a representative of a retail public utility in whose service area the Comal Springs or San Marcos Springs is located;

(F) a representative of a holder of an initial regular permit issued by the authority for irrigation, to be appointed by the commissioner of agriculture;

(G) a representative of an agricultural producer from the Edwards Aquifer region, to be appointed by the commissioner of agriculture;

(H) a representative of environmental interests from the Texas Living Waters Project, to be appointed by the governing body of that project; and

(I) a representative of recreational interests in the Guadalupe River Basin, to be appointed by the Parks and Wildlife Commission.

(f) The steering committee shall work with Texas A&M University to:

(1) establish a regular meeting schedule and publish that schedule to encourage public participation; and

(2) not later than October 31, 2007, hire a program director to be housed at Texas A&M University.

(g) Texas A&M University may accept outside funding to pay the salary and expenses of the program director hired under this section and any expenses associated with the university's participation in the creation of the steering committee or subcommittees established by the steering committee.

(h) Where reasonably practicable or as required by law, any

meeting of the steering committee, the Edwards Aquifer area expert science subcommittee, or another subcommittee established by the steering committee must be open to the public.

(i) The steering committee appointed under this section shall appoint an Edwards Aquifer area expert science subcommittee not later than December 31, 2007. The expert science subcommittee must be composed of an odd number of not fewer than seven or more than 15 members who have technical expertise regarding the Edwards Aquifer system, the threatened and endangered species that inhabit that system, springflows, or the development of withdrawal limitations. The Bureau of Economic Geology of The University of Texas at Austin and the River Systems Institute at Texas State University shall assist the expert science subcommittee. Chapter 2110, Government Code, does not apply to the size, composition, or duration of the expert science subcommittee.

(j) The Edwards Aquifer area expert science subcommittee shall, among other things, analyze species requirements in relation to spring discharge rates and aquifer levels as a function of recharge and withdrawal levels. Based on that analysis and the elements required to be considered by the authority under Section 1.14 of this article, the expert science subcommittee shall, through a collaborative process designed to achieve consensus, develop recommendations for withdrawal reduction levels and stages for critical period management including, if appropriate, establishing separate and possibly different withdrawal reduction levels and stages for critical period management for different pools of the aquifer needed to maintain target spring discharge and

aquifer levels. The expert science subcommittee shall submit its recommendations to the steering committee and all other stakeholders involved in the recovery implementation program under this section.

(k) The initial recommendations of the Edwards Aquifer area expert science subcommittee must be completed and submitted to the steering committee and other stakeholders not later than December 31, 2008, and should include an evaluation:

(1) of the option of designating a separate San Marcos pool, of how such a designation would affect existing pools, and of the need for an additional well to measure the San Marcos pool, if designated;

(2) of the necessity to maintain minimum springflows, including a specific review of the necessity to maintain a flow to protect the federally threatened and endangered species; and

(3) as to whether adjustments in the trigger levels for the San Marcos Springs flow for the San Antonio pool should be made.

(l) In developing its recommendations, the Edwards Aquifer area expert science subcommittee shall:

(1) consider all reasonably available science, including any Edwards Aquifer-specific studies, and base its recommendations solely on the best science available; and

(2) operate on a consensus basis to the maximum extent possible.

(m) After development of the cooperative agreement, the steering committee, with the assistance of the Edwards Aquifer area

expert science subcommittee and with input from the other recovery implementation program stakeholders, shall prepare and submit recommendations to the authority. The recommendations must:

(1) include a review of the critical period management plan, to occur at least once every five years;

(2) include specific monitoring, studies, and activities that take into account changed conditions and information that more accurately reflects the importance of critical period management; and

(3) establish a schedule for continuing the validation or refinement of the critical period management plan adopted by the authority and the strategies to achieve the program and cooperative agreement described by this section.

(n) In this subsection, "recharge facility" means a dam, reservoir, or other method of recharge project and associated facilities, structures, or works but does not include facilities designed to recirculate water at Comal or San Marcos Springs. The steering committee shall establish a recharge facility feasibility subcommittee to:

(1) assess the need for the authority or any other entity to own, finance, design, construct, operate, or maintain recharge facilities;

(2) formulate plans to allow the authority or any other entity to own, finance, design, construct, operate, or maintain recharge facilities;

(3) make recommendations to the steering committee as to how to calculate the amount of additional water that is made

available for use from a recharge project including during times of critical period reductions;

(4) maximize available federal funding for the authority or any other entity to own, finance, design, construct, operate, or maintain recharge facilities; and

(5) evaluate the financing of recharge facilities, including the use of management fees or special fees to be used for purchasing or operating the facilities.

(o) The steering committee may establish other subcommittees as necessary, including a hydrology subcommittee, a community outreach and education subcommittee, and a water supply subcommittee.

(p) On execution of the memorandum of agreement described by Subsection (b) of this section, the steering committee described by Subsection (e) of this section may, by majority vote of its members, vote to add members to the steering committee, change the makeup of the committee, or dissolve the committee. If the steering committee is dissolved, the program director hired under Subsection (f) of this section shall assume the duties of the steering committee.

(q) The authority shall provide an annual report to the governor, lieutenant governor, and speaker of the house of representatives not later than January 1 of each year that details:

(1) the status of the recovery implementation program development process;

(2) the likelihood of completion of the recovery implementation program and the cooperative agreement described by

Subsection (c) of this section;

(3) the extent to which the recommendations of the Edwards Aquifer area expert science subcommittee are being considered and implemented by the authority;

(4) any other actions that need to be taken in response to each recommendation;

(5) reasons explaining why any recommendation received has not been implemented; and

(6) any other issues the authority considers of value for the efficient and effective completion of the program and the cooperative agreement under this section.

SECTION 12.07. Subsections (b), (h), and (i), Section 1.29, Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993, are amended to read as follows:

(b) The authority shall assess equitable aquifer management fees based on aquifer use under the water management plan to finance its administrative expenses and programs authorized under this article. Each water district governed by Chapter 36 [~~52~~], Water Code, that is within the authority's boundaries may contract with the authority to pay expenses of the authority through taxes in lieu of user fees to be paid by water users in the district. The contract must provide that the district will pay an amount equal to the amount that the water users in the district would have paid through user fees. The authority may not collect a total amount of fees and taxes that is more than is reasonably necessary for the administration of the authority.

(h) Fees assessed by the authority may not be used to fund

the cost of reducing withdrawals or retiring permits or of judgments or claims related to withdrawals or permit retirements [~~Special fees collected under Subsection (c) or (d) of this section may not be used to finance a surface water supply reservoir project~~].

(i) The authority and other stakeholders, including state agencies, listed under Section 1.26A of this article shall provide money as necessary[~~, but not to exceed five percent of the money collected under Subsection (d) of this section,~~] to finance the activities of the steering committee and any subcommittees appointed by the steering committee and the program director of the recovery implementation program under Section 1.26A of this article. The authority shall provide, as necessary, up to $75,000 annually, adjusted for changes in the consumer price index, to finance the South Central Texas Water Advisory Committee's administrative expenses and programs authorized under this article.

SECTION 12.08. Subsection (a), Section 1.45, Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993, is amended to read as follows:

(a) The authority may own, finance, design, construct, [~~build or~~] operate, and maintain recharge dams and associated facilities, structures, or works in the contributing or recharge area of the aquifer if the recharge is made to increase the yield of the aquifer, [~~and~~] the recharge project does not impair senior water rights or vested riparian rights, and the recharge project is not designed to recirculate water at Comal or San Marcos Springs.

SECTION 12.09. Subsections (b) and (d), Section 1.14, Section 1.21, and Subsections (a), (c), and (d), Section 1.29, Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993, are repealed.

SECTION 12.10. (a) Before January 1, 2012, a suit may not be instituted in a state court contesting:

(1) the validity or implementation of this article; or

(2) the groundwater withdrawal amounts recognized in Section 1.14, Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993, as amended by this Act.

(b) If applicable, a party that files a suit in any court shall be automatically removed from the steering committee established under Section 1.26A, Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993, as added by this Act.

(c) A suit against the Edwards Aquifer Authority may not be instituted or maintained by a person who owns, holds, or uses a surface water right and claims injury or potential injury to that right for any reason, including any actions taken by the Edwards Aquifer Authority to implement or enforce Article 1, Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993, as amended. This section does not apply to suits brought pursuant to Section 1.45, Chapter 626, Acts of the 73rd Legislature, Regular Session, 1993.

SECTION 12.11. The change in law made by this article applies only to a cause of action filed on or after the effective date of this article. A cause of action that is filed before the effective date of this article is governed by the law in effect

immediately before the effective date of this article, and that law is continued in effect for that purpose.

SECTION 12.12. This article takes effect immediately if this Act receives a vote of two-thirds of all the members elected to each house, as provided by Section 39, Article III, Texas Constitution. If this Act does not receive the vote necessary for immediate effect, this article takes effect September 1, 2007.

ARTICLE 13. TERRITORY OF CULBERSON COUNTY GROUNDWATER CONSERVATION DISTRICT

SECTION 13.01. Chapter 1075, Acts of the 75th Legislature, Regular Session, 1997, is amended by adding Section 3A to read as follows:

Sec. 3A. In addition to the portions of Culberson County included in the boundaries of the district on August 31, 2007, the boundaries of the district include all of the remaining territory in Culberson County.

SECTION 13.02. (a) The annexation under Section 3A, Chapter 1075, Acts of the 75th Legislature, Regular Session, 1997, as added by this article, of the additional territory in Culberson County that was not included in the boundaries of the Culberson County Groundwater Conservation District on August 31, 2007, is subject to ratification at an election held under Section 36.328, Water Code, and this section in which only the voters residing in the territory to be annexed are eligible to vote.

(b) The board of directors of the Culberson County Groundwater Conservation District shall hold the ratification election on the first uniform election date that occurs after the

effective date of this article that allows for compliance with the time requirements of the Election Code.

(c) If a majority of the voters voting at the ratification election vote in favor of the annexation, the Culberson County Groundwater Conservation District boundaries include all of Culberson County.

(d) If a majority of the voters voting at the ratification election do not vote in favor of the annexation, the Culberson County Groundwater Conservation District boundaries are unchanged and this article expires.

ARTICLE 14. EFFECTIVE DATE

SECTION 14.01. Except as otherwise provided by this Act, this Act takes effect September 1, 2007.

President of the Senate

Speaker of the House

I hereby certify that S.B. No. 3 passed the Senate on March 27, 2007, by the following vote: Yeas 30, Nays 0; May 24, 2007, Senate refused to concur in House amendments and requested appointment of Conference Committee; May 26, 2007, House granted request of the Senate; May 27, 2007, Senate adopted Conference Committee Report by the following vote: Yeas 29, Nays 1.

Secretary of the Senate

I hereby certify that S.B. No. 3 passed the House, with amendments, on May 23, 2007, by the following vote: Yeas 133, Nays 8, one present not voting; May 26, 2007, House granted request of the Senate for appointment of Conference Committee; May 28, 2007, House adopted Conference Committee Report by the following vote: Yeas 113, Nays 28, two present not voting.

Chief Clerk of the House

Approved:

Date

Governor