



Kathy Alexander, PhD
Policy and Technical Analyst
Water Availability Division

Environmental Flow Standards
Trinity and San Jacinto Rivers and Galveston Bay
BBASC
May 1, 2024

Senate Bill 3 (SB3) Background

SB3 changed the process for incorporating environmental protection into water rights permits for new appropriations of water by requiring TCEQ to adopt environmental flow standards through rulemaking.

The rules apply to new appropriations of surface water issued after September 1, 2007 and don't affect water rights issued before that time.

The rules adopted by TCEQ are the basis for permit conditions in water rights to protect the adopted environmental flow standards.

SB3 Groups

Environmental Flows
Advisory Group

- Composed of legislators and state agency leaders

Texas Science
Advisory Committee

- Supports the Advisory Group and local science teams

Local Basin
Stakeholder
Committee (BBASC)

- Represent a diverse set of interests in a basin system

Local Basin Science
Team (BBEST)

- Evaluate basin specific science

Rulemaking Process Overview

The Advisory Group appoints a local stakeholder group for each basin and the stakeholders appoint a local science team.

The science team (BBEST) develops an environmental flow regime adequate to support a sound ecological environment without considering future human water needs.

The stakeholders (BBASC) take the science team's recommendations and look at other factors, including the present and future needs for water for other uses, and develop a recommendation for rules.

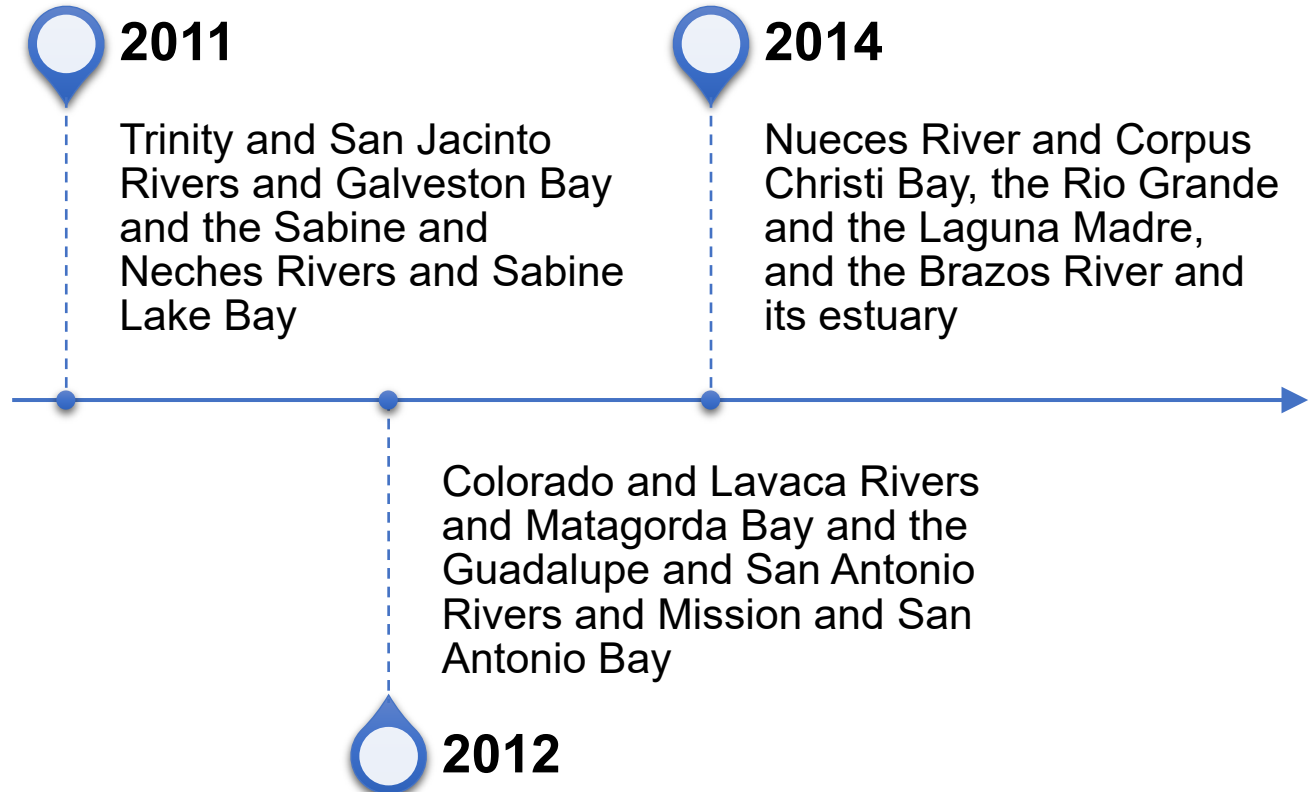
TCEQ takes the recommendations from the science team and the stakeholders and uses that information along with other factors to develop rules for balanced environmental flow standards.

Environmental Flow Standards

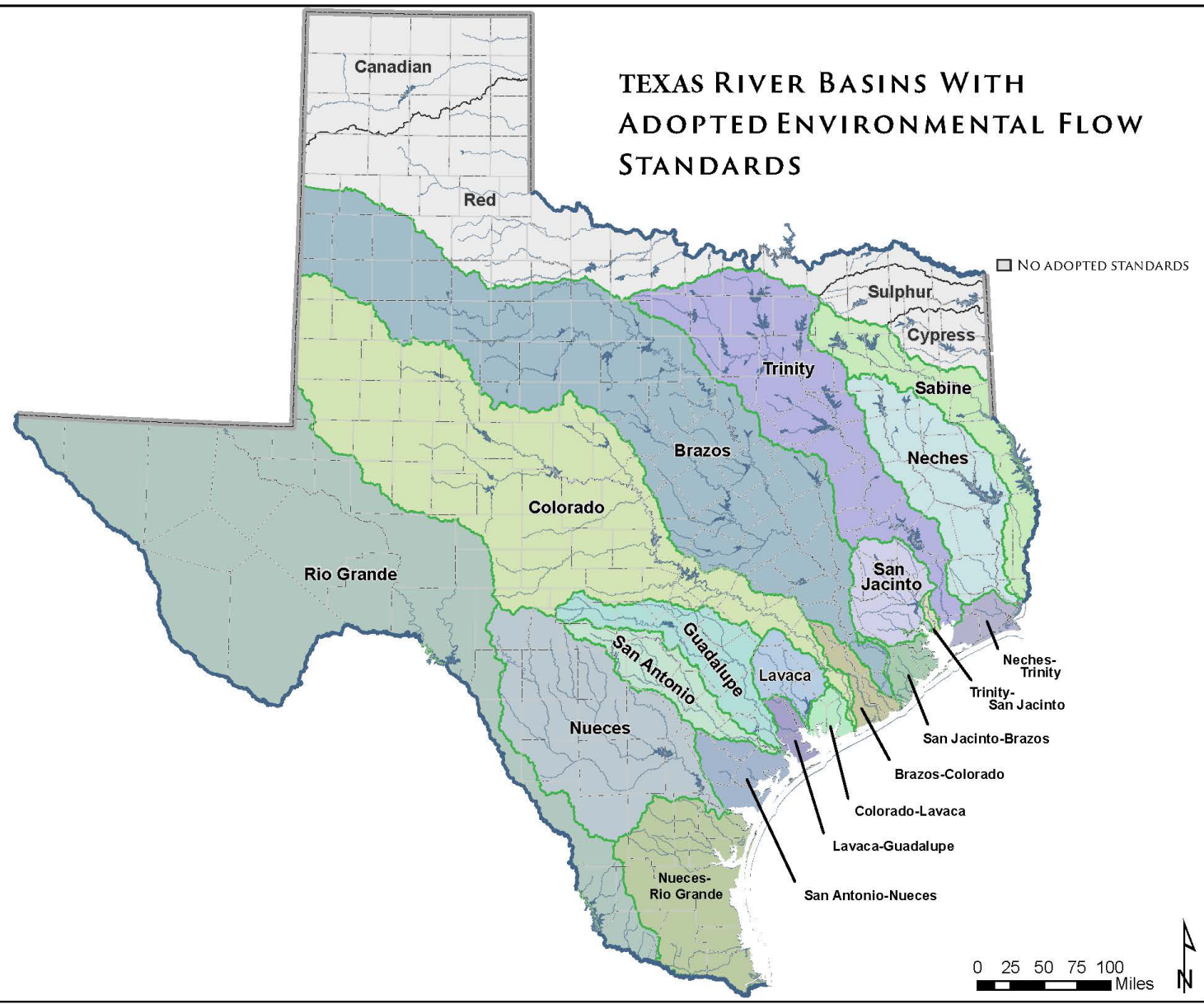
The Law - TCEQ shall adopt environmental flow standards

The Science – How much water does a river need?
Determined by local basin scientists

The Policy – Local basin stakeholders and TCEQ balance the interests



TEXAS RIVER BASINS WITH ADOPTED ENVIRONMENTAL FLOW STANDARDS



What are Environmental Flow Standard Rules?

The rules are adequate to protect a sound ecological environment.

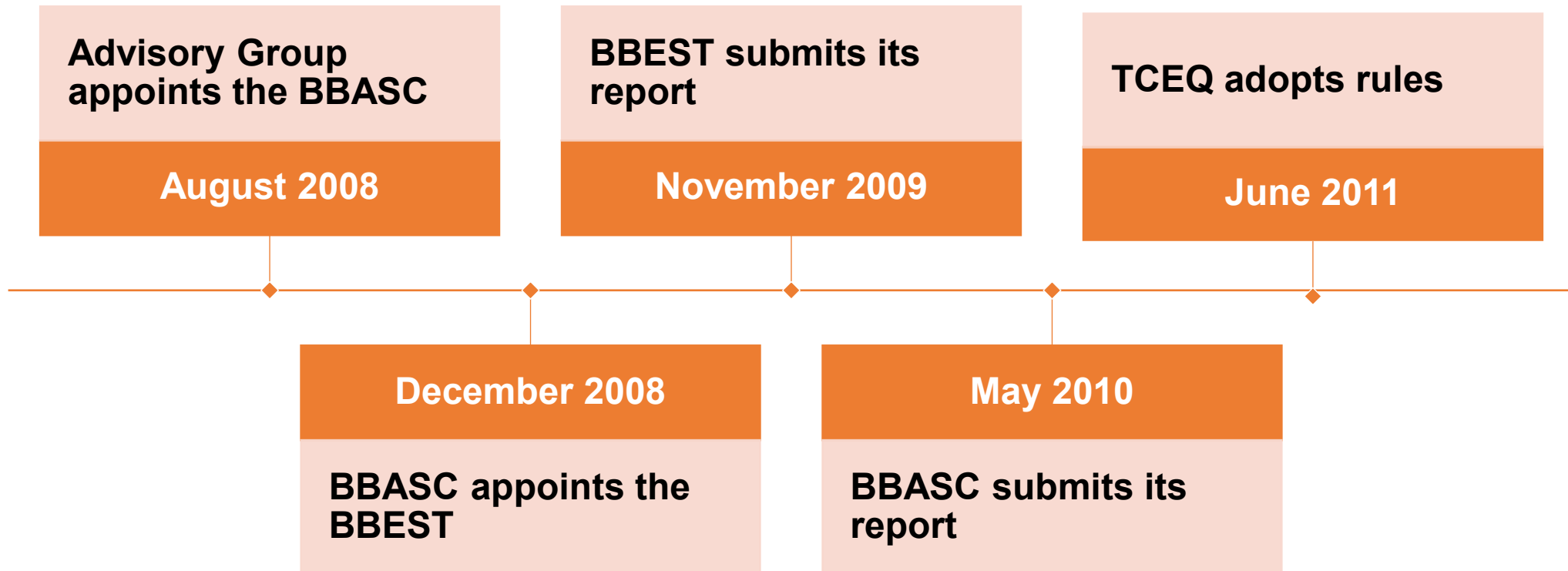
The rules establish a set of streamflow standards at defined measurement points, typically United States Geological Survey gaging stations, within each basin.

The rules contain a schedule of flow quantities that reflect seasonal and yearly fluctuations and vary geographically, by specific location in a watershed.

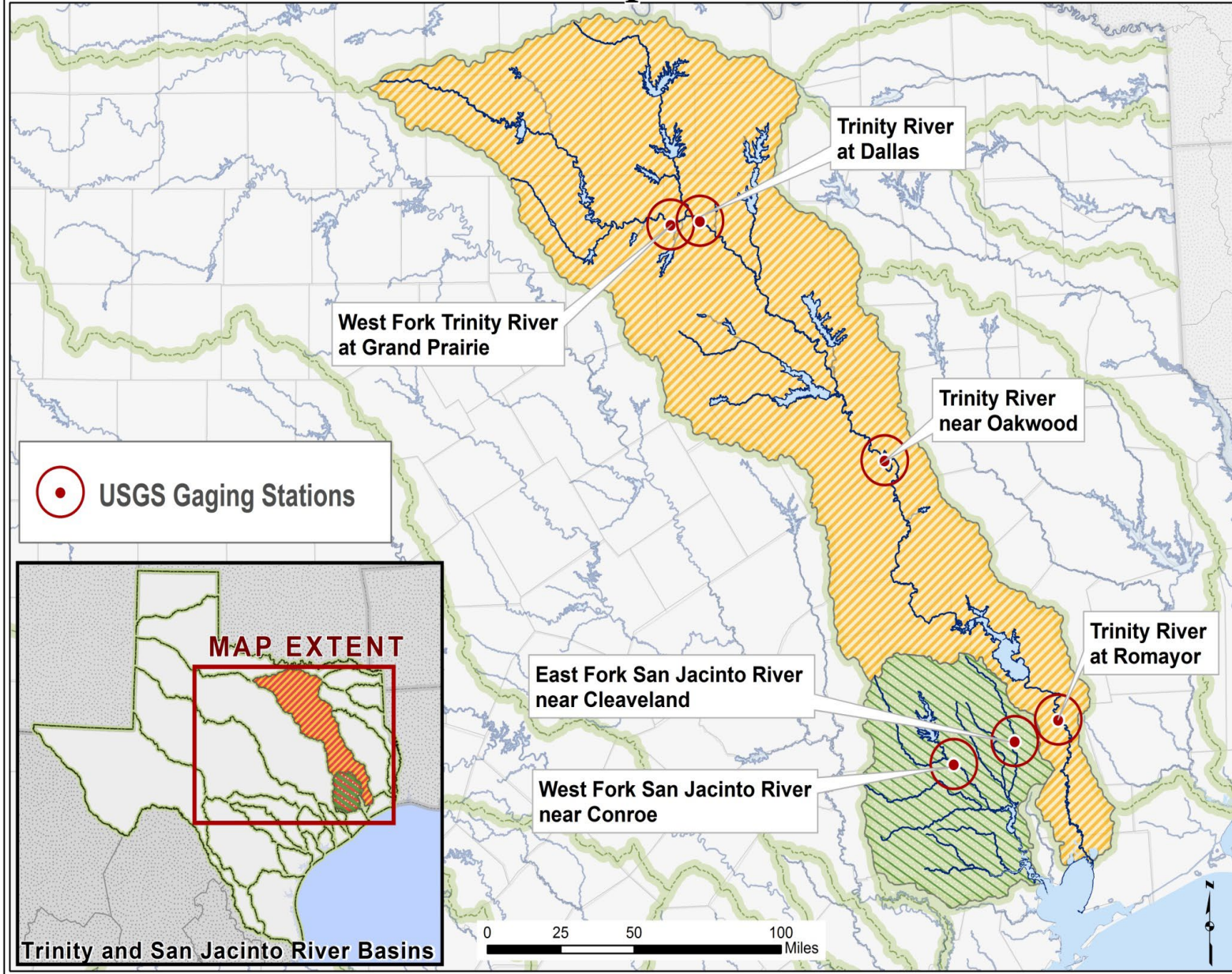
The rules include subsistence flows, base flows, high flow pulses, and implementation criteria.

The rules establish a set of freshwater inflow standards to Galveston Bay that reflect seasonal and yearly fluctuations.

Trinity and San Jacinto Rivers and Galveston Bay Rulemaking Process Timeline



Measurement Points for Subchapter B- Trinity & San Jacinto River Basins



Instream Flow Standards

- **Subsistence Flows**
- **Base Flows**
- **Pulse Flows**

Season	Subsistence	Base	Pulse
Winter	120 cfs	340 cfs	Trigger: 3,000 cfs Volume: 18,000 af Duration: 5 days
Spring	160 cfs	450 cfs	Trigger: 7,000 cfs Volume: 130,000 af Duration: 11 days
Summer	75 cfs	250 cfs	Trigger: 2,500 cfs Volume: 23,000 af Duration: 5 days
Fall	100 cfs	260 cfs	Trigger: 2,500 cfs Volume: 23,000 af Duration: 5 days

cfs = cubic feet per second
af = acre-feet

Freshwater Inflow Standards

The freshwater inflow standards are not implemented as special conditions in a permit.

TCEQ looks at whether a new application impairs freshwater inflow standards as part of the water availability determination for new appropriations of water.

Bay and Estuary Freshwater Inflow Standards for the Galveston Bay System

Basin	Annual Inflow Quantity (af)	Annual Target Frequency	Winter Inflow Quantity (af)	Winter Target Frequency	Spring Inflow Quantity (af)	Spring Target Frequency	Summer Inflow Quantity (af)	Summer Target Frequency	Fall Inflow Quantity (af)	Fall Target Frequency
Trinity	2,816,532	50%	500,000	40%	1,300,000	40%	245,000	40%	N/A	N/A
	2,245,644	60%	250,000	50%	750,000	50%	180,000	50%	N/A	N/A
	1,357,133	75%	160,000	60%	500,000	60%	75,000	60%	N/A	N/A
San Jacinto	1,460,424	50%	450,000	40%	500,000	40%	220,000	40%	200,000	40%
	1,164,408	60%	278,000	50%	290,000	50%	100,000	50%	150,000	50%
	703,699	75%	123,000	60%	155,000	60%	75,000	60%	90,000	60%

af = acre-feet

How are the rules used?

- TCEQ protects the adopted instream environmental flow standards in the water rights permitting process by including the standards as special conditions in all water right permits for new appropriations of water.
- TCEQ also evaluates each application for a new appropriation of water to ensure that granting the application would not impair any adopted freshwater inflow standards.
- TCEQ may also include the numerical values in the adopted standards as streamflow special conditions in permits that are not for new appropriations of water.
- The rules can be used to inform strategies to support environmental flows.

SB3 included an adaptive management process

- The adaptive management process is guided by the state-level Environmental Flows Advisory Group and Science Advisory Committee and considers workplans developed by the local basin groups.
- TCEQ's role in the adaptive management process is to provide administrative and logistical support to the local basin groups, provide technical water rights information when requested, and adopt rules.
- TCEQ will undertake a future rulemaking if requested by the BBASC or the Advisory Group.

SB3 allows TCEQ to adjust the flow requirements in a permit issued after 2007 if the standards are revised in a subsequent rulemaking.

The adjustment may not exceed 12.5% of the annualized total of the existing permit condition.

In determining whether to adjust a permit condition, TCEQ can consider a voluntary contribution of water or an amendment that adds instream uses and bay and estuary freshwater inflows as a purpose of use.

**What
happens if
new rules
are
adopted?**

Senate Bill 1397 (SB1397)

- The Texas Legislature passed SB1397 in 2023. SB1397 made changes to the environmental flows process.
- SB1397 requires the TCEQ to submit a [Biennial Report](#) on the adopted environmental flow standards, with the first report submitted on Jan. 1, 2024.
- The Biennial Report includes:
 - progress in implementing environmental flow standards and TCEQ activities;
 - input provided by TWDB and TPWD on their environmental flow activities; and
 - recommendations for the workplan required by Texas Water Code Section 11.02363(b).

SB1397 – Adaptive Management Going Forward

- SB1397 removed the abolishment clauses for the SB3 groups.
- The bill also added new Texas Water Code Section 11.02363 which charged the Advisory Group with reviewing the adopted standards and developing a Statewide workplan.
- The Statewide workplan will prioritize and schedule the future review of the adopted standards.
- The Advisory Group can also provide rulemaking recommendations.
- The first Statewide workplan is due January 1, 2025.

Questions?

Kathy Alexander, PhD

Kathy.Alexander@tceq.texas.gov

512-239-0778