



Environmental Flows

The term *environmental flows* is used to describe the freshwater flows needed to maintain ecologically healthy riverine and estuarine ecosystems. With the state's population expected to increase by 70 percent over the next 50 years, the Texas Legislature found it important to determine, with existing information, how much water to set aside for the environment so that remaining water can be considered for meeting future water supply needs.

Senate Bill 3

In 2007, the 80th Texas Legislature created a stakeholder-driven process to determine environmental flow needs for all the major river basins and associated bay systems of the state. The process involves an Environmental Flows Advisory Group, a statewide Science Advisory Committee, basin and bay area stakeholder committees, basin and bay expert science teams, and staff from the three natural resource agencies—Texas Commission on Environmental Quality, Texas Parks and Wildlife Department, and the Texas Water Development Board (TWDB)—that provide technical and administrative support to the advisory group and the various committees and teams.

The advisory group consists of nine members, including three appointed by the governor (one each from the Texas Commission on Environmental Quality, TWDB, and Texas Parks and Wildlife Department), three members of the Texas Senate appointed by the lieutenant governor, and three members of the Texas House of Representatives appointed by the speaker of the house. The advisory group appoints the Science Advisory Committee, which provides recommendations to the advisory group related to the science of environmental flows. The advisory group also appoints the members of each Basin and Bay Area Stakeholder Committee. Each of these stakeholder committees in turn appoints a Basin and Bay Expert Science Team.

Each basin and bay expert science team initially develops environmental flow regime recommendations for submission to their respective stakeholder committee, the advisory group, and the Texas Commission on Environmental Quality. The stakeholder committees then submit to the Texas Commission on Environmental Quality their comments regarding their science team's recommendations as well as their own environmental flow regime recommendations. The advisory group, with input from the

Science Advisory Committee, is permitted to submit comments to the Texas Commission on Environmental Quality. The Texas Commission on Environmental Quality then adopts environmental flow standards based on the submitted recommendations as well as other factors.

Once a stakeholder committee submits their environmental flow recommendations to the Texas Commission on Environmental Quality, they develop an adaptive management work plan describing the additional data and scientific studies necessary to allow for the validation or refinement of the environmental flow analyses, recommendations, or adopted standards and to identify strategies to achieve those standards. The recommended studies and activities, if implemented, are designed to provide additional information for future rulemaking by the Texas Commission on Environmental Quality.

Timeline

Senate Bill 3 identified seven priority basin and bay systems (see map). The development of environmental flow regime recommendations has been completed for all seven systems. The Texas Commission on Environmental Quality has adopted flow standards for all basins (Table 1). Adaptive management work plans developed by the stakeholder committees have been submitted for the Sabine-Neches, Trinity-San Jacinto, Brazos, Colorado-Lavaca, Guadalupe-San Antonio, and Nueces basins. The Canadian, Red, Sulphur, and Cypress basins will be addressed at a later date with a schedule to be determined by the Environmental Flows Advisory Group.

In 2013, the 83rd Texas Legislature appropriated funds to the TWDB to support 15 priority studies identified in the adaptive management work plans for five basin-bay areas, including the Trinity-San Jacinto, Brazos, Colorado-Lavaca, Guadalupe-San Antonio, and Nueces basins. Subsequently, the 84th and 85th Texas Legislatures appropriated funds to the TWDB to further support the collection and analysis of environmental flow information. The funding has supported a total of 29 studies in the same five basin-bay areas previously mentioned, as well as additional environmental flow data collection and study efforts throughout the state's river basins and estuaries that support agency programs.

Table 1. Senate Bill 3 schedule of rule adoption, effective rule date, review cycle, and review of standards.

Basin-Bay	Rule Adoption Date	Rule Effective Date	Adaptive Management Work Plan – Date Submitted	Adaptive Management Work Plan – Date Approved	Review Cycle	First Review of Standards ¹
Sabine-Neches	April 20, 2011	August 30, 2012	December 6, 2012, with addendum added on August 8, 2011	September 8, 2011	5 years	September 1, 2013 ²
Trinity-San Jacinto	April 20, 2011	May 15, 2011	May 4, 2012	<i>Not yet approved</i>	5 years ³	May 15, 2016 ⁴
Brazos	February 12, 2014	March 6, 2014	November 13, 2013	<i>Not yet approved</i>	10 years ³	March 6, 2024 ⁴
Colorado-Lavaca	August 8, 2012	August 30, 2012	June 26, 2012	<i>Not yet approved</i>	10 years ³	August 30, 2022 ⁴
Guadalupe-San Antonio	August 8, 2012	August 30, 2012	May 25, 2012	<i>Not yet approved</i>	5 years ³	August 30, 2017 ⁴
Nueces	February 12, 2014	March 6, 2014	November 30, 2012	<i>Not yet approved</i>	5 years ³	March 6, 2019 ⁴
Rio Grande	February 12, 2014	March 6, 2014	<i>Not yet submitted</i>	<i>n/a</i>	10 years ⁴	March 6, 2024 ⁴

¹ First review of standards is determined from the Rule Effective Date unless otherwise noted.

² Date was determined to allow the review to be available to the regional water planning group. Information from Section 298.290, Schedule for Revision of Standards, www.tceq.texas.gov/assets/public/legal/rules/rules/pdflib/298c.pdf.

³ Review cycle recommended in the Basin and Bay Area Stakeholder Committee adaptive management work plan.

⁴ Review date if advisory group approves adaptive management work plan and the approved review cycle is adopted in the Texas Commission on Environmental Quality rules. Otherwise cycle defaults to 10 years.

Contact Information

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Additional information is available on the Texas Commission on Environmental Quality's website:

www.tceq.texas.gov/permitting/water_supply/water_rights/eflows/group.html.

Priority River Basins and Bay Systems

