



Texas Instream Flow Program

A sound natural environment is essential for maintaining the quality of life enjoyed by Texans and future generations of Texans and also for maintaining a strong state economy. Healthy aquatic ecosystems conserve biodiversity and support many industries, including recreation, tourism, commercial fishing, transportation, and water supply. With the population of Texas projected to nearly double in the next 50 years, the demand for water is anticipated to exceed the current supply, requiring increased usage of both surface water and groundwater resources. There are concerns that water development without adequate provisions to protect instream flows will lead to degraded aquatic ecosystems.

What is instream flow?

In the most basic sense, “instream flow” is water flowing in a stream channel; however, the term also implies flowing water that supports a larger stream ecosystem, including riparian (stream bank) and floodplain areas. For purposes of this program, instream flow is defined as the flow regime (quantity and timing of flow) that is adequate to maintain an ecologically sound environment. The goal of an instream flow study is to identify appropriate flow regimes that conserve fish and wildlife resources while also providing sustained benefits for other human uses of water resources. These studies consider a wide range of environmental variables, such as habitat, hydrology, biology, physical processes, water quality, and connectivity, dictating a multidisciplinary effort. Given their complexity, instream flow studies take several years to complete.

Senate Bill 2

In 2001, the Texas Legislature addressed the importance of balancing human and environmental water needs. Texas Water Code §16.059 directs the Texas Parks and Wildlife Department, the Texas Commission on Environmental Quality, and the Texas Water Development Board, in cooperation with other appropriate agencies, to “jointly establish and continuously maintain an instream flow data collection and evaluation program.” In addition, the legislature directed the agencies to “conduct studies and analyses to determine appropriate methodologies for determining flow conditions in the state rivers and streams necessary to support a sound ecological environment.” Final study reports were completed for the lower San Antonio River in December 2017 and middle and lower Brazos River in June 2018.

Final study reports for the middle Trinity and lower Guadalupe rivers will be completed by December 2019.

Program Development

The three agencies jointly developed two documents that describe the Texas Instream Flow Program. The *Programmatic Work Plan* identifies six priority studies (see map), outlines the roles of the state agencies, and presents the scope of the studies. The *Technical Overview* provides a technical discussion of instream flow methods. The *Technical Overview* has been revised and improved in response to comments from stakeholders within the state and a scientific peer review by state and national experts. As the Texas Instream Flow Program moves forward, involvement of the public and local, state, and federal cooperators as well as university researchers, river authorities, and others is required. Although the legislature directed the three state agencies to oversee the program, stakeholder and public involvement will determine its successful outcome. The Texas Instream Flow Program can have an influential impact on the future of Texas’ natural heritage by providing accurate and useful data and tools for water planning, water rights permitting, and the conservation of fish and wildlife.

Relationship to Environmental Flows Process

Detailed instream flow studies like those initiated by the Texas Instream Flow Program require several years to complete and, when complete, will provide flow determinations for only a small portion of the state. Recognizing the need to more quickly identify appropriate amounts of water to set aside for the environment, the Texas Legislature passed Senate Bill 3 in 2007, creating an accelerated process for developing instream flow and freshwater inflow standards for major river basins and bays. The Senate Bill 3 environmental flows process initiated by Texas Water Code §11.02362 relied on existing information and best available science. The timing of the process did not allow for the completion of new, detailed studies before recommendations were made and standards adopted. However, an adaptive management component allows for refinement of adopted flow recommendations at least every 10 years. Texas Water Code §11.02362(p) insures that results of more detailed technical studies, such as those completed by the Texas Instream Flow Program, will be available to inform future refinements of the environmental flow standards.

Contact Information

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Additional information about the program is located on the Texas Instream Flow Program website: www.twdb.texas.gov/surfacewater/flows/instream/index.asp.

Texas Instream Flow Program Studies

