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# Environmental Flows

## POSITION STATEMENT

The San Antonio River Authority (River Authority) continues to advance its scientific knowledge of and expertise in the function of the riverine, bay and estuary systems and supports studies, projects and programs that rely on the best available science to ensure that adequate environmental flows are maintained to protect these natural resources which are critical to ecological integrity, economic vitality and quality of life within our basin and state.

## IMPORTANCE TO THE SAN ANTONIO RIVER WATERSHED

The quantity, quality and seasonal variability of water flowing in the river and tributaries are critical to maintaining the health of the riverine, riparian, bay and estuarine ecosystems. As the basin's population and economy continues to diversify and grow, competing uses for limited water resources are inevitable. To sustain and enrich life - human, plant and animal - within the San Antonio River Watershed, the River Authority promotes equitable uses of surface water resources to meet all the varying needs placed on this limited resource.

## SUMMARY

The River Authority invests in expanding the scientific information available in order to advance collective knowledge and understanding of the functions of the interconnected ecosystems within the San Antonio River Basin. Decisions relating to environmental flow standards and specific flow requirements must remain dynamic and open for modification as more science is developed that increases understanding of these highly complex river and estuarine ecosystems.

The State of Texas sponsors two on-going programs that support the development of environmental flow standards for rivers and bays within the state, the Texas Instream Flows Program created by Senate Bill 2 (SB 2) and the Environmental Flows Program implemented by Senate Bill 3 (SB 3), passed in 2001 and 2007 respectively. The Texas Instream Flow Program was designed to intensively study the ecosystem of rivers and determine the amount of water needed under various flow conditions to sustain a healthy river ecosystem. The Environmental Flows Program, through combined science and stakeholder processes, balances human and environmental water needs to establish environmental flow requirements for rivers, bays and estuaries. These requirements, developed basin by basin, apply to new appropriations for surface water use in each of the major river basins and estuarine systems across Texas. The River Authority has invested significant time, funding and policy and scientific leadership into both programs.

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In August 2012, the Texas Commission on Environmental Quality (TCEQ) adopted the environmental flow standards and strategy recommendations approved by the Guadalupe, San Antonio, Mission and Aransas Rivers and Mission, Copano, Aransas and San Antonio Bays and Basin Area Stakeholder Committee with some modifications for use in future surface water permitting. The recommendations incorporated the preliminary recommendations from the Texas Instream Flow program for the San Antonio River. Since the initial adoption, the Texas Legislature has provided the Texas Water Development Board with funding to support additional science based study efforts that will be used to inform the subsequent review of the environmental flow requirements due following August 2022. As the review date nears, the River Authority urges the State Legislature and the TCEQ to provide more certainty on the technical and stakeholder processes that will be used in the next round of review of the environmental flow standards, as the original SB 3 legislation did not address how the subsequent review will occur and how new science will be incorporated in the review and update of the current standards.

SARA urges the Texas Commission on Environmental Quality (TCEQ) to adopt the environmental flow standards and strategy recommendations approved by the Guadalupe, San Antonio, Mission and Aransas Rivers and Mission, Copano, Aransas and San Antonio Bays and Basin Area Stakeholder Committee for use in future surface water permitting. These recommendations incorporate the preliminary recommendations from the Texas Instream Flow program for the San Antonio River.

Lastly, SARA staff and Board Directors are participating in the San Antonio Bay Partnership, a stakeholder-based, collaborative, non-regulatory management program seeking to protect and preserve the San Antonio Bay system through sound science-based strategies.

### **RIVER AUTHORITY ENVIRONMENTAL FLOW PROJECTS**

The River Authority continues to advance environmental flows science through a number of projects and initiatives and conducts essential field studies to address the key data gaps to ensure future policy decisions affecting environmental flows management decisions are based on the best available science.

- The River Authority staff and Board Directors participate in the San Antonio Bay Partnership, a stakeholder-based, collaborative, non-regulatory management program working to protect and preserve the San Antonio Bay system through sound science-based strategies. The River Authority supports the San Antonio Bay Partnership's efforts to position San Antonio Bay to be eligible for inclusion in the National Estuary Program.
- The River Authority is actively engaged with the Texas Parks and Wildlife Department and the United States Fish and Wildlife Service in conducting research on the conservation of freshwater mussels in the San Antonio River watershed.
- The River Authority works closely with the county soil and water conservation districts within the River Authority's jurisdiction to financially incentivize the installation of water quality best management practices, provide technical assistance and educational programs to landowners.
- The River Authority continues to work with the Texas Water Development Board (TWDB) to implement scientific studies that enhance our understanding of the river, estuary and bay. The River Authority has funded an ongoing Environmental Flows Validation project that assesses whether the existing environmental flow standards adequately protect these natural resources and a prior project that sought to determine how freshwater inflows impact the range and health of Rangia clams in San Antonio Bay.
- The River Authority has developed ecological dynamic simulation (EDYS) models of San Antonio Bay and the San Antonio River watershed in order to evaluate the effects of varying precipitation, land use, freshwater inflows and tidal inundation on the saltwater marsh vegetation in San Antonio Bay. The EDYS models and other studies and efforts are helping the River Authority and the State of Texas to better understand and protect these complex river and estuarine natural resource systems.

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#### **FOR MORE INFORMATION:**

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[www.sara-tx.org/public\\_resources/library/documents/LSAR\\_FINAL\\_INTERIM\\_REPORT\\_20110831.pdf](http://www.sara-tx.org/public_resources/library/documents/LSAR_FINAL_INTERIM_REPORT_20110831.pdf)

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