SAN ANTONIO RIVER AUTHORITY

Instream Flows and Freshwater Inflows

Friday, January 24, 2024

History

- Freshwater Inflow Needs – 1975, 1985, 1984 & 1997 – Senate Bill 1
- Texas Instream Flows Program – 2001 – Senate Bill 2
- Environmental Flows Process – 2007 – Senate Bill 3

Sound Ecological Environment

Freshwater Inflow Needs

- 1975-1997
  - Texas Water Code
  - *Effects of Permits on Bays and Estuaries and Instream Uses*
  - How much water is needed to provide a beneficial inflow?

Freshwater Inflow Needs

Freshwater Inflow Needs

TX Instream Flows Program (TIFP) – SB2

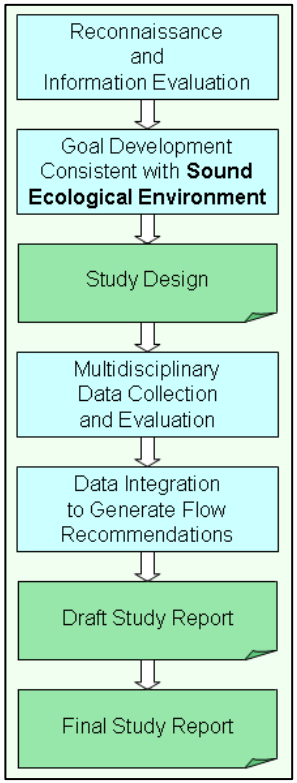
TX Instream Flows Program (TIFP)

Step 1 – What data exists?

Step 2 – Goal development

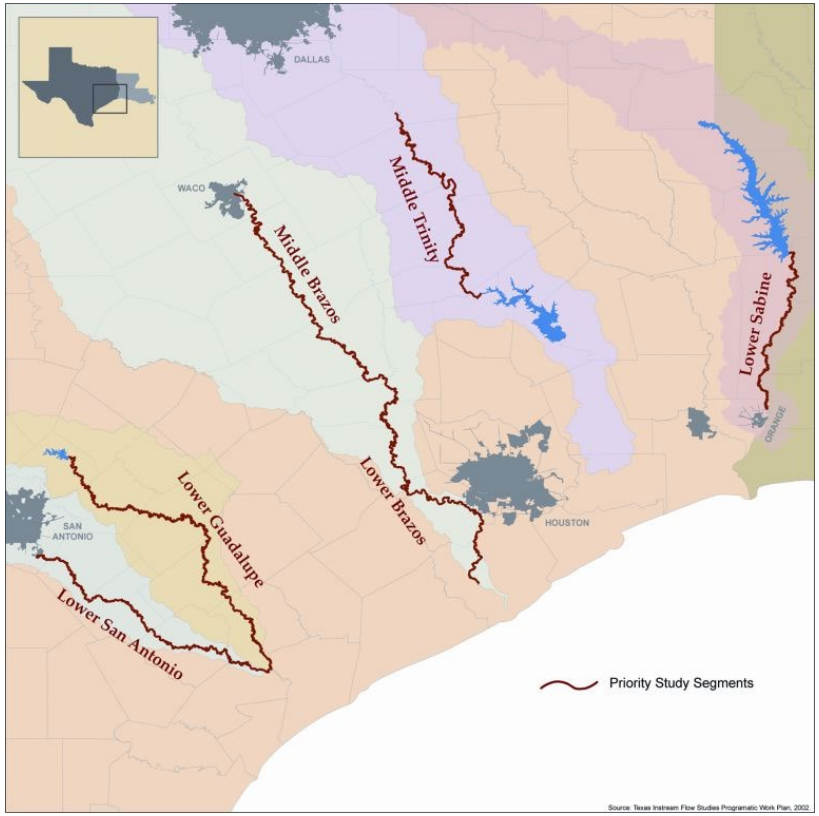
Step 3 – Data collection

Step 4 – Data to recommendations



TX Instream Flows Program (TIFP)

- Six priority sub-basins
- Assessed:
  - Aquatic life and habitat
  - Water quality
  - Riparian assessments
  - Stream channel formation



https://www.twdb.texas.gov/surfacewater/flows/instream/index.asp

Lower San Antonio River TIFP Goal

- The goal for the Lower San Antonio River system is a naturally functioning and sustainable ecosystem that supports a balance of ecological benefits and economic, recreational and educational uses.

TIFP Sampling

Statewide Environmental Flows – SB3

- Set Environmental Flow (E-Flow) Standards

- Created:
  - BBASC – Bay and Basin Area Stakeholder Committee

  - BBEST – Bay and Basin Expert Science Team

E-Flows Standards

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	

Freshwater Inflows

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

Freshwater Inflows

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

Next Steps?

- Revisit standards every decade?
- No interest or funding from the legislature
- River Authority established long-term monitoring protocol

Questions?
To learn more about the San Antonio River Authority, visit sariverauthority.org