

TEXAS

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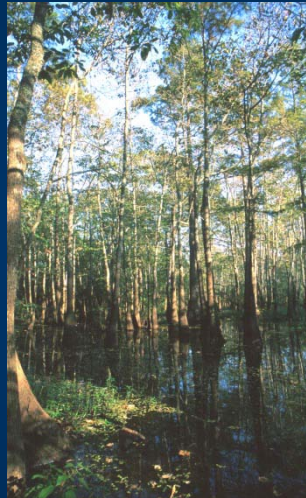


Protecting Environmental Flows in Texas

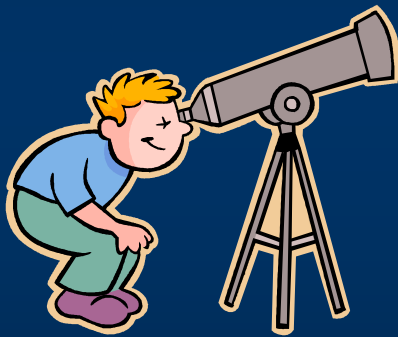
Cindy Loeffler, Chief
Water Resources Branch
Coastal Fisheries Division

Environmental Flows

Flows that remain in the waterbody and provide for aquatic and riparian habitat; water quality protection; recreation; navigation; and freshwater inflows to bays and estuaries



A Look Back at Key Milestones...



- 1957:** Texas Water Planning Act enacted in response to severe statewide drought
- 1975:** SB137 requires comprehensive freshwater inflow studies be completed
- 1985:** HB2 calls for more study of bays and estuaries and requires TWC to assess permit effects
- 1987:** SB 683 - water rights must consider effects of water right permits on bays and estuaries, instream uses, fish and wildlife habitat, and water quality
- 1997:** SB 1 Regional Water Planning – consider impacts to environmental flows
- 2001:** SB 2 calls for instream flow studies
- 2007:** SB 3 establishes environmental flows process

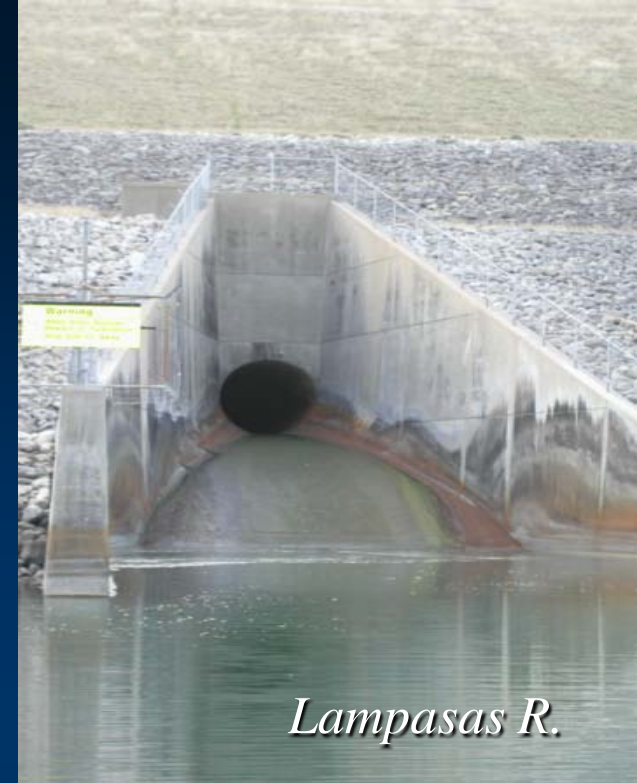
Water Right Permitting in Texas

Most rights were issued prior to 1985
and have no environmental protection

Over 200 major reservoirs in Texas; only a handful have
releases for environmental flows

Prior Appropriation; perpetual permits; only one chance to
address environmental impacts

Burden falls to post 1985 rights to protect environmental
flows; permit-by-permit piecemeal basis



Lampasas R.

Article 1 SB 3/HB 3 Environmental Flows 80th Texas Legislature

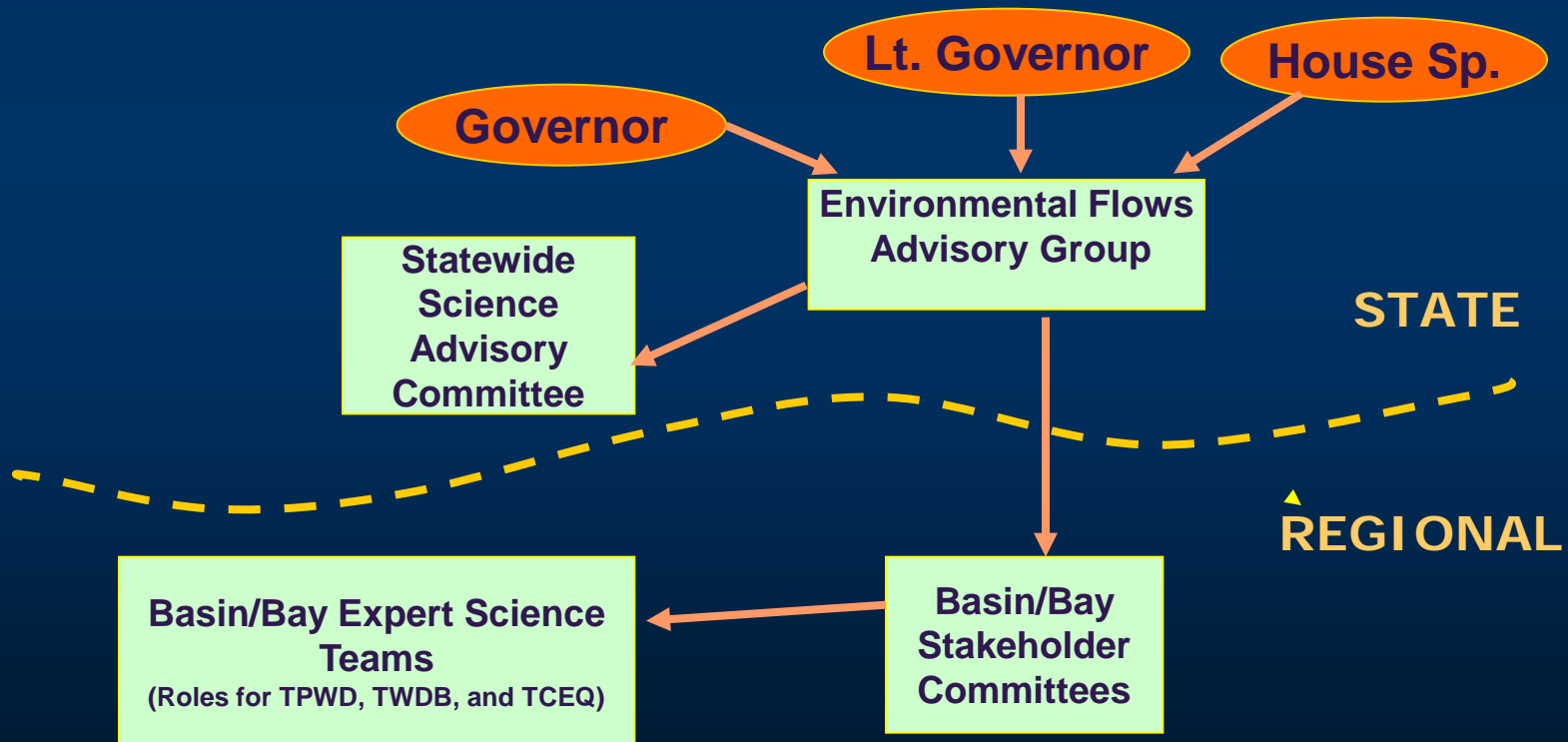


Senate Bill 3 and House Bill 3 set out a new regulatory system for protecting environmental flows; consensus-based regional approach involving a balanced representation of stakeholders

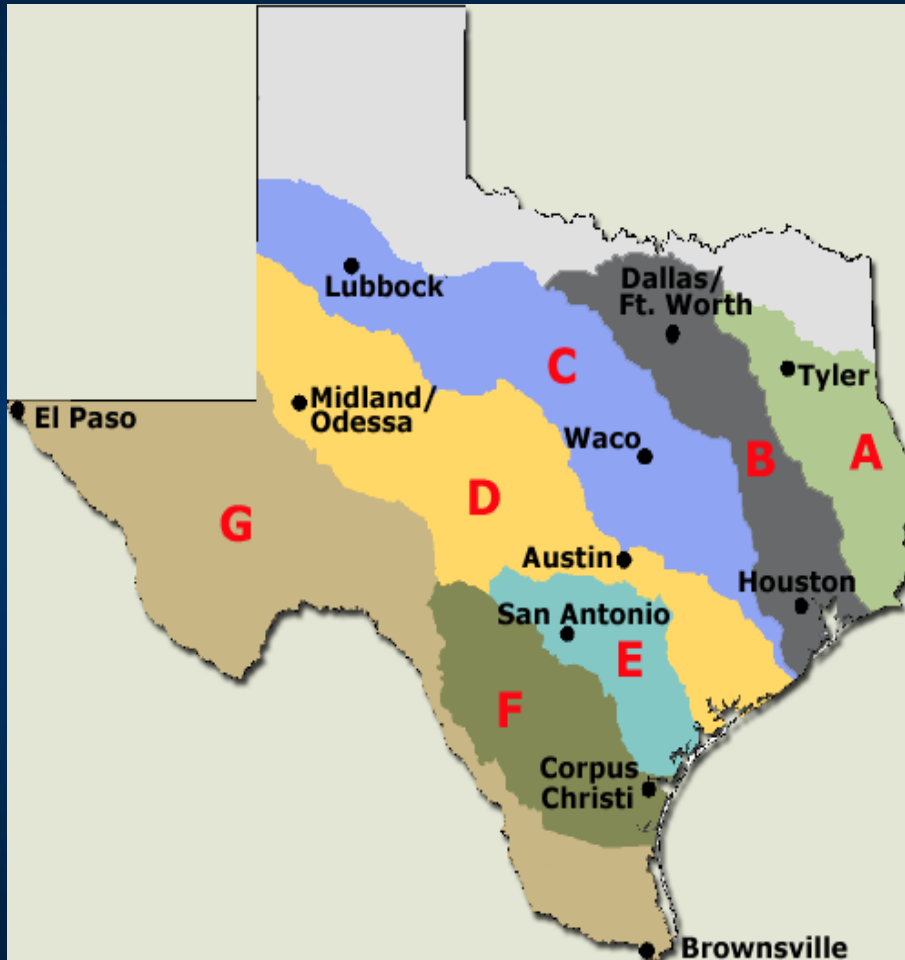
SB 3 Article 1

Process for Environmental Flows

the Players



Basin/Bay Areas



A. Sabine & Neches Rivers/Sabine Lake Bay Area (light green) 2007-2010

B. Trinity & San Jacinto Rivers/Galveston Bay Area (grey) 2007-2010

C. Brazos River/Bay & Estuary Area (blue) 2009-TBD

D. Colorado & Lavaca Rivers/Matagorda & Lavaca Bays Area (yellow) 2008-TBD

E. Guadalupe, San Antonio, Mission, & Aransas Rivers/Mission, Copano, Aransas & San Antonio Bays Area (aqua) 2008-TBD

F. Nueces River/Corpus Christi & Baffin Bays Area (dark green) 2009 – TBD

G. Rio Grande/Rio Grande Estuary & the Lower Laguna Madre Area (tan) 2009 -TBD

Basin/Bay Area Stakeholder Committees



Appointed by the Environmental Flows Advisory Group

Must have at least 17 members representing “fair and equitable balance of interest groups”

Each stakeholder committee appoints an expert science team to assist in the process

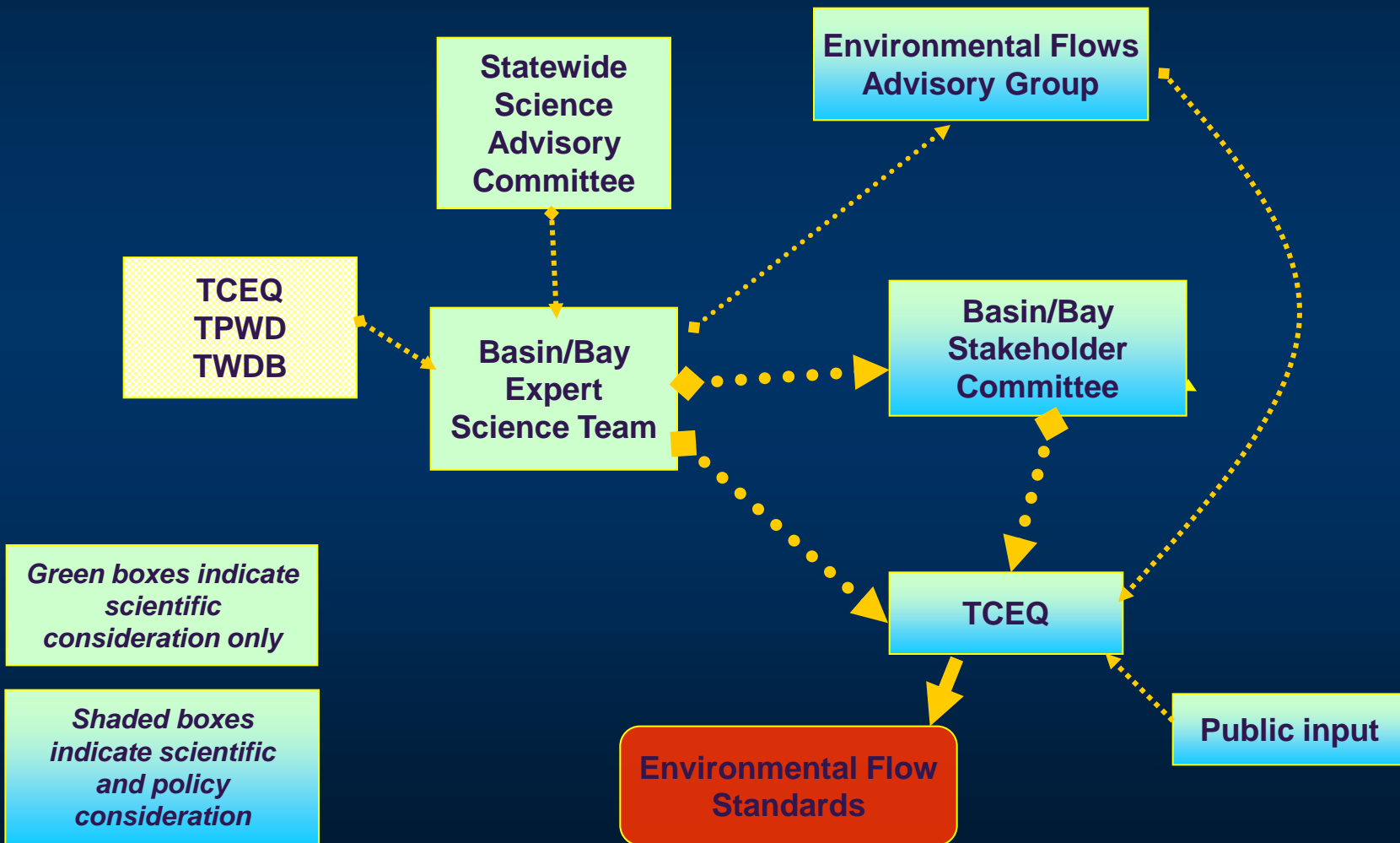
TPWD will provide technical assistance and may serve as non-voting members on these expert science teams



Basin/Bay Area Stakeholder Committees - members

- Agricultural water users (irrigators, free range livestock ranchers, concentrated animal feeding operations)
- Recreational water users (coastal recreational anglers and businesses supporting recreation)
- Municipalities
- Soil and water conservation districts
- Industrial water users (refining, chemical manufacturing)
- Electricity generation, production of paper products and timber)
- Commercial fisherman
- Public interest groups
- Regional water planning groups
- Groundwater conservation districts
- River authorities and other districts with jurisdiction over surface water
- Environmental interests

SB 3 Process for Environmental Flow Regime Development



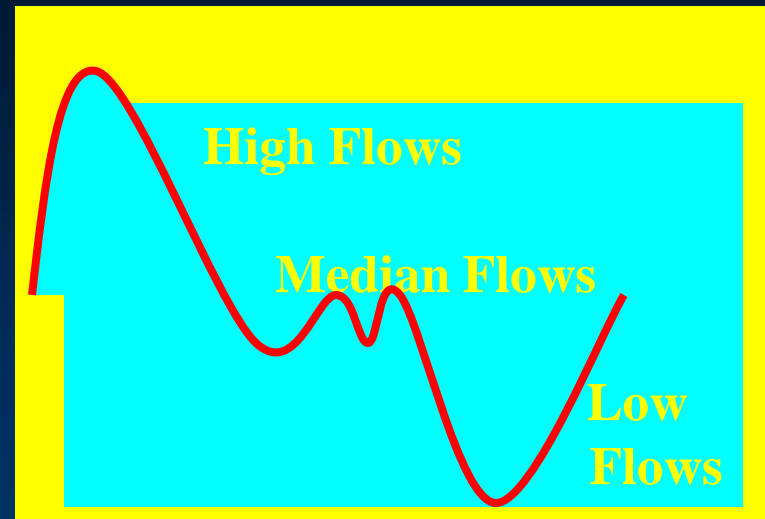
Environmental Flow Regime Development



Environmental flow regimes are to be developed and recommended by the expert science teams working with technical support from state agencies and academic institutions; recommendations shall be based solely on best available science

Environmental flow regime recommendations are then adopted by the stakeholder committees and submitted to TCEQ for formal consideration in commission rulemaking

Environmental Flow Regime Definition



“A schedule of flow quantities that reflects seasonal and yearly fluctuations that typically would vary geographically, by a specific location in a watershed, and that are shown to be adequate to support a sound ecological environment and to maintain the productivity, extent, and persistence of key aquatic habitats in and along the affected water bodies.”

Environmental Flows Process



Each Basin/Bay Area Stakeholders Committee reviews findings of Expert Science Team and recommends environmental flow regimes to TCEQ

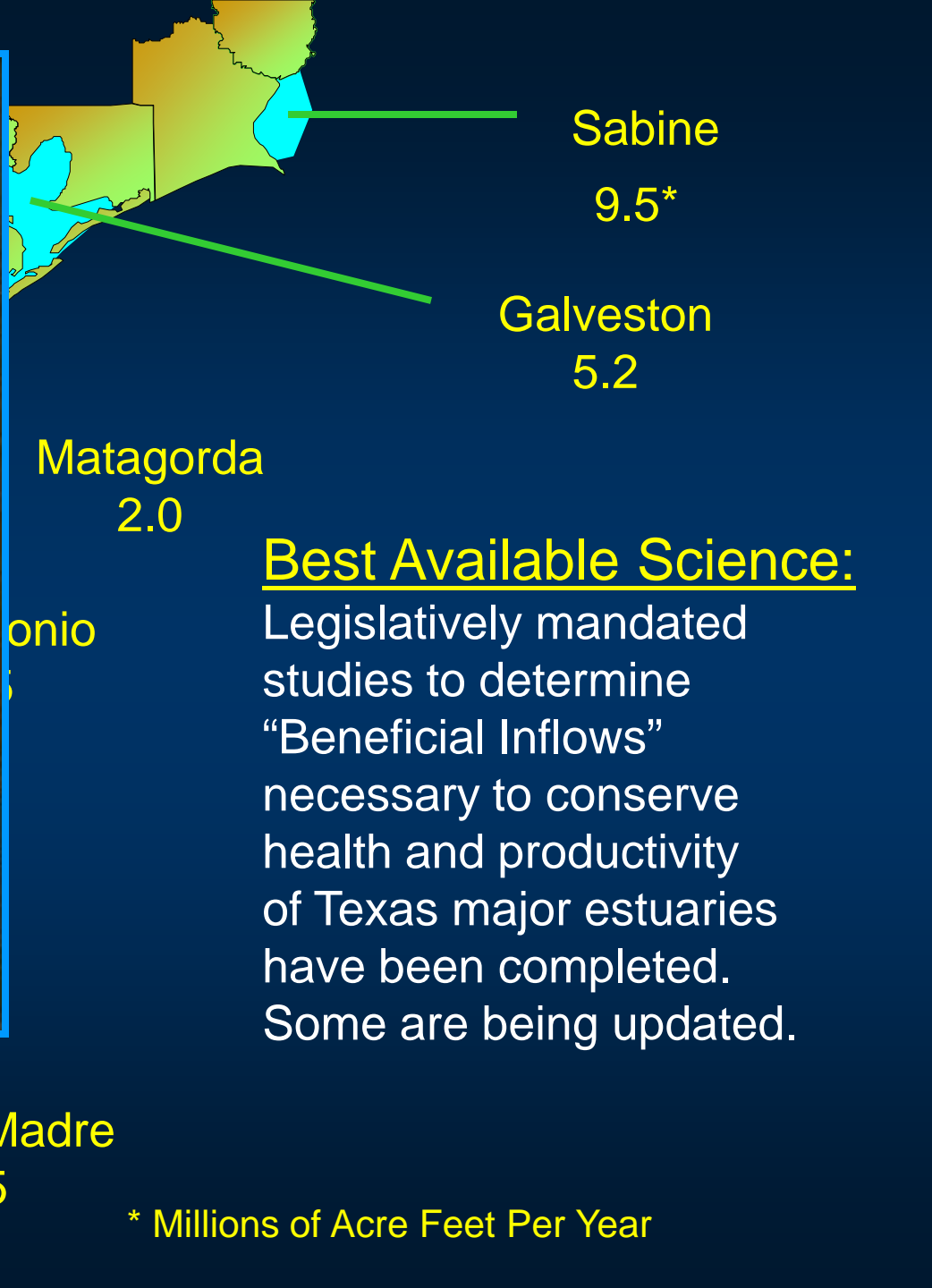
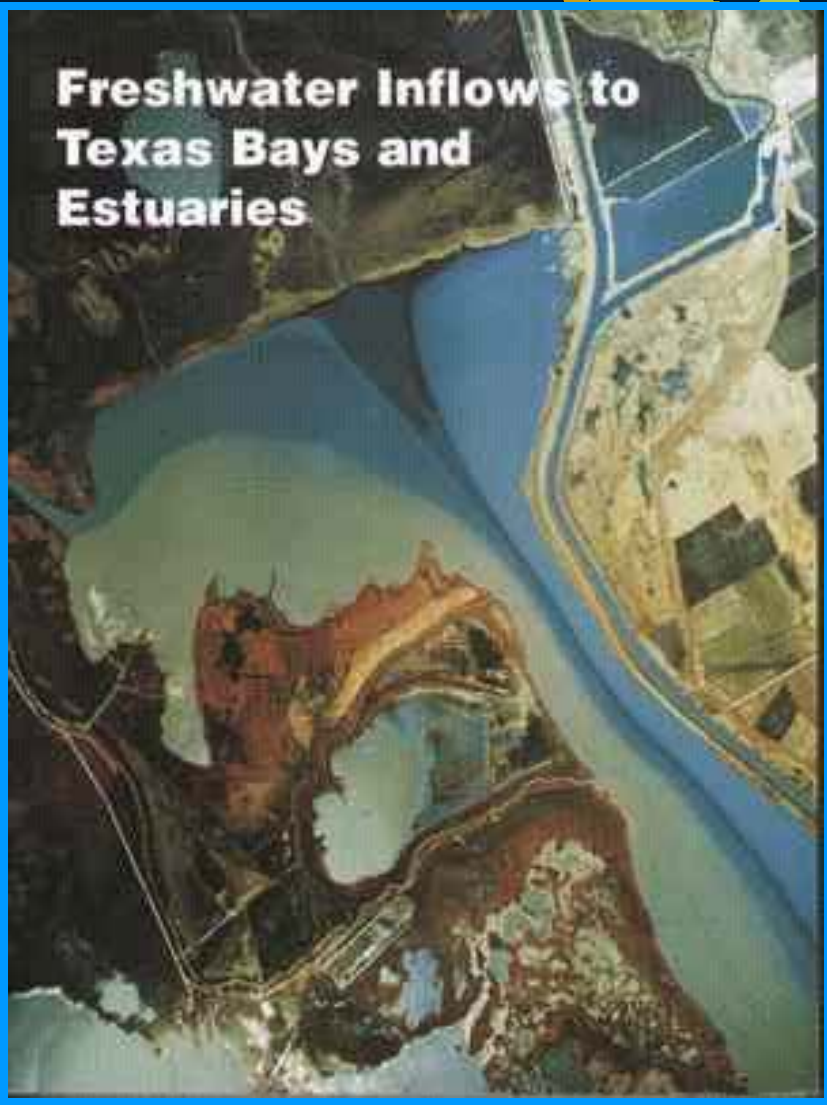
Through rulemaking, TCEQ adopts environmental flow standards and establishes an environmental flow “set aside” if unappropriated water is available; rulemaking process allows for broad public input

Environmental Flows Management



Environmental flow standards and implementation strategies are subject to “adaptive management,” meaning that the success and/or failure of management measures will be assessed and adjusted as new science and information becomes available. Flow standards will be subject to periodic review and revision.

Freshwater Inflows to Texas Bays and Estuaries

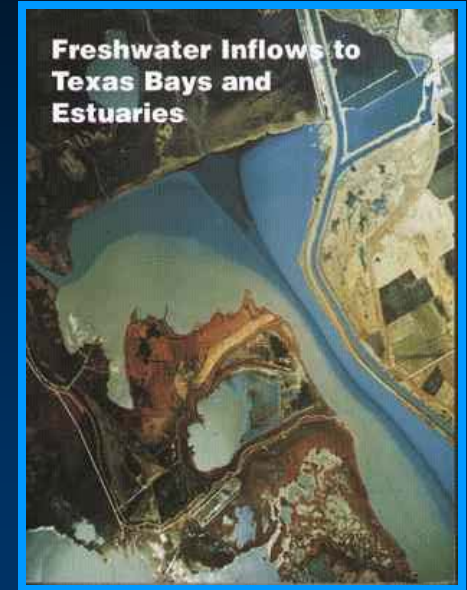
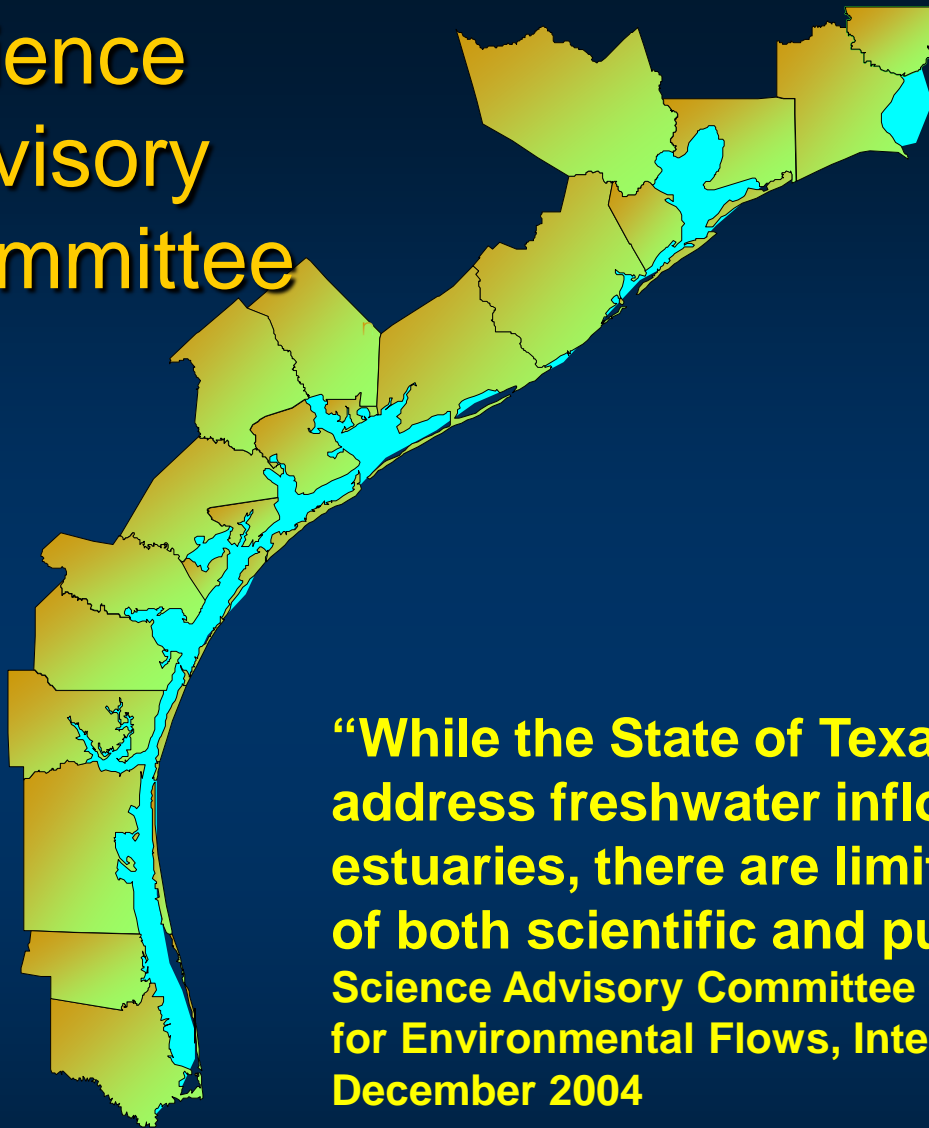


Best Available Science:

Legislatively mandated studies to determine “Beneficial Inflows” necessary to conserve health and productivity of Texas major estuaries have been completed. Some are being updated.

* Millions of Acre Feet Per Year

Science Advisory Committee



“While the State of Texas has pioneered tools to address freshwater inflow needs for bays and estuaries, there are limitations to these tools in light of both scientific and public policy evolution.” – Science Advisory Committee to the Study Commission on Water for Environmental Flows, Interim Report to the 79th Legislature, December 2004

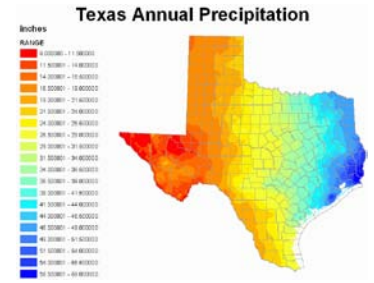
Texas Instream Flow Program







The Texas Legislature directed TPWD, TWDB and TCEQ to:

- Establish a data collection and evaluation program
- Determine flow conditions necessary to support a sound ecological environment in Texas rivers and streams
- SB 3 extended deadline to complete priority studies December 31, 2016

TEXAS INSTREAM FLOW PROGRAM STUDIES



-  Priority Study
-  2nd Tier
-  Special Study
-  Existing Reservoir
-  Proposed Reservoir

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