

Understanding the Regional **Water** Planning Framework: Approaches, Strategies, and Outcomes

Robert E. Mace, Ph.D., P.G.

The Meadows Center for **Water** & the Environment/Texas State University

presented at

The Indiana **Water** Summit

August 12, 2020

1

1

René-Robert Cavelier, Sieur de La Salle



- First European in Indiana (1679)
- Shipwrecked (and slain) in Texas (1687)

2



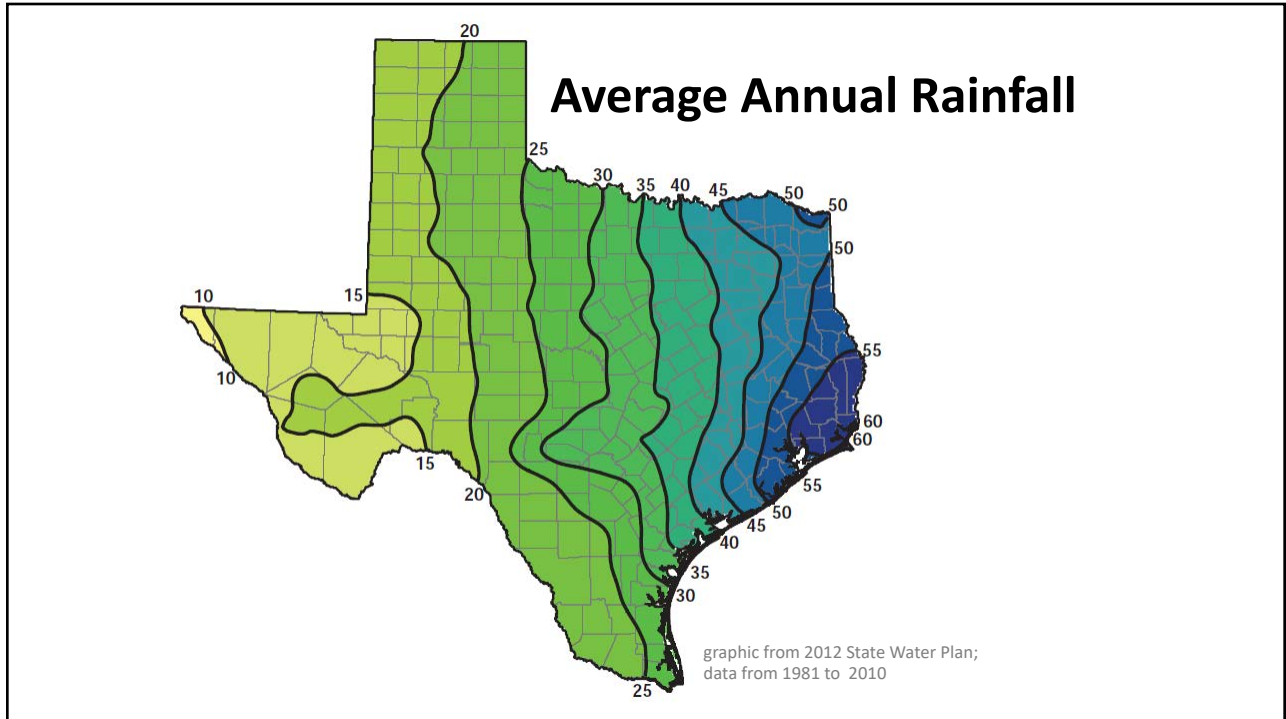
LITTLE INDIANA, TEXAS. Little Indiana was a schoolhouse community on a county road east of Farm Road 2225, north of Farm Road 515, and ten miles northwest of Quitman in northwestern Wood County. The community was settled in 1900 by a number of Indiana families who had been drawn by reports of plentiful timber and rich farmland. The area, near what is now the northeast arm of the Lake Fork Reservoir, turned out to be poor farmland that was susceptible to flooding. Many of the families returned to Indiana, but around 1901 those who stayed established a one-teacher school, built from local timber hauled by oxen to the nearby sawmill. Though Little Indiana grew for several years, by 1907 the community had been abandoned because of illness and continuing poor crops. A state historical marker identifies the site.

3

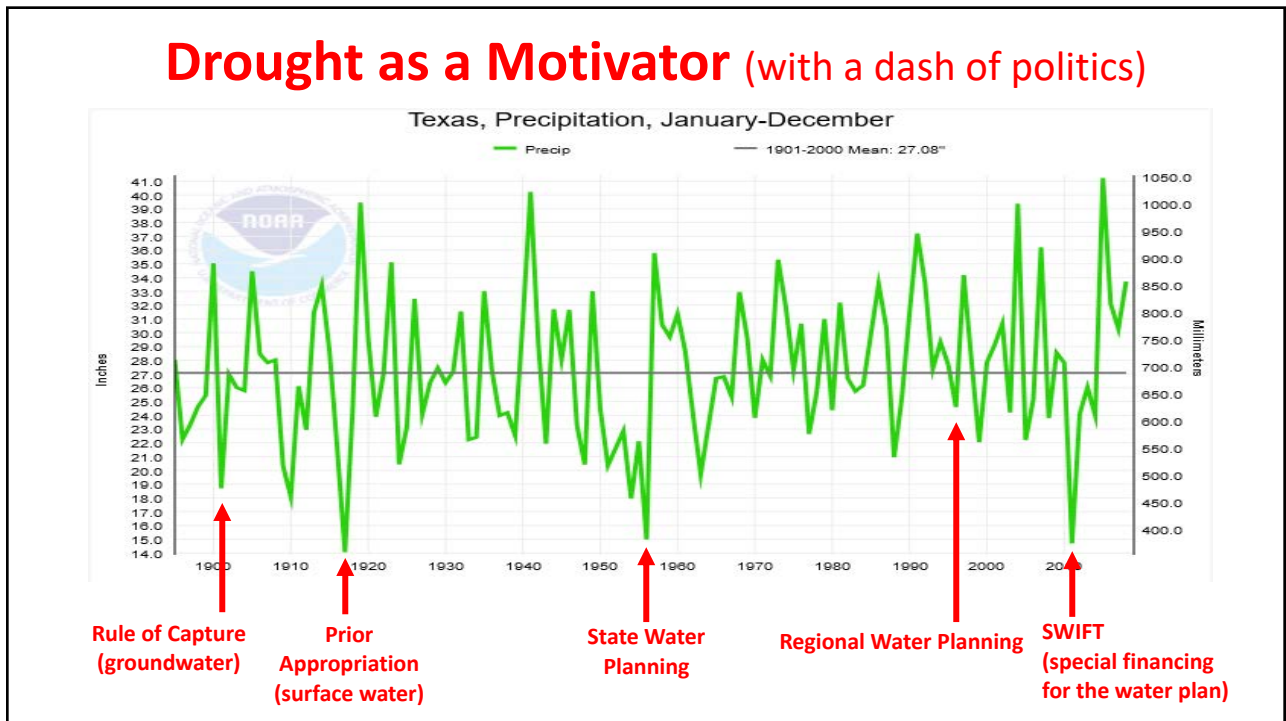


Stratford, Texas; April 18, 1935

4



5



6

Planning (in a nutshell)

- How much do we have now?
- How much are we going to need?
- Do we have enough?
- If we don't have enough, what do we need to do to get more?
- How much will it cost?

focused on drought of record
focused on quantity
looks out 50 years
updated every 5 years

7

Overall goal:

- Texas has enough water for its people, economy, and environment during a repeat of the drought of record

Planning goal:

- Each water user knows what the future holds and what they need to do to have enough water

8

Carrots and Sticks

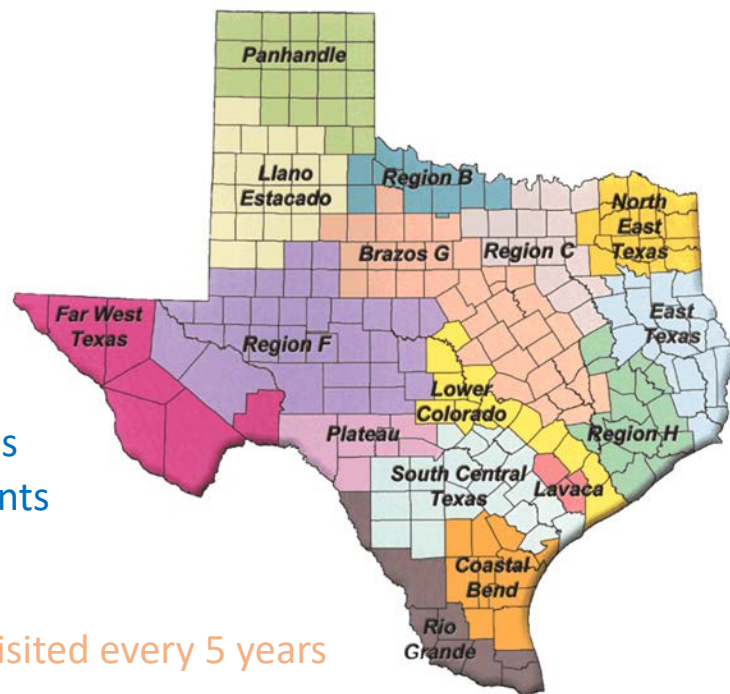
- State mandated
- State financial assistance if project is in the plan
- Surface-water permit if project is in the plan

9

How were regional water planning areas defined?

1. Hydrology
2. Socioeconomics
3. Easy metes and bounds
4. Service-area adjustments
5. A dash of politics

public process revisited every 5 years



10

Regional Water Planning by the numbers

16 regional water
planning groups

12
interest groups

450 voting and non-
voting planning group
members



6 water use categories
municipal, manufacturing,
mining, steam-electric,
irrigation, and livestock

3,000
water user groups
including communities
with >= 500 people

5
year planning cycle

11

Interest Groups (seats at the table...)

- The general public
- Counties
- Municipalities
- Industry
- Agriculture
- Environment
- Small business
- Electric-generating utilities
- Water districts
- Water utilities
- Groundwater management areas
- Texas Water Development Board
- Texas Department of Agriculture
- Texas Commission on Environmental Quality
- Texas Parks and Wildlife Department
- Liaisons from neighboring planning groups

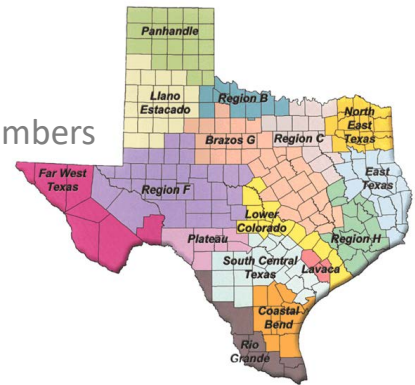
voting

non-voting

12

Planning Groups

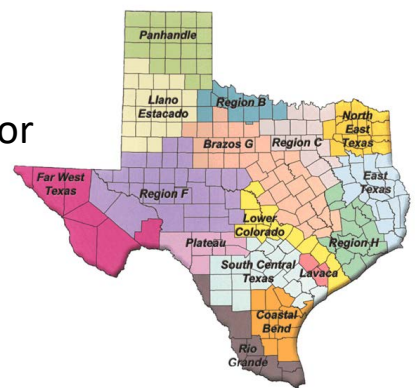
- Initial members assigned by Texas Water Development Board
- Planning groups manage membership thereafter
- Planning groups can add additional interest groups and voting and non-voting members
 - Each planning group has >12 voting members
 - One has 30 voting members
 - Average group has 28 voting and non-voting members
- Members are volunteers; no compensation
- Open-ended terms



13

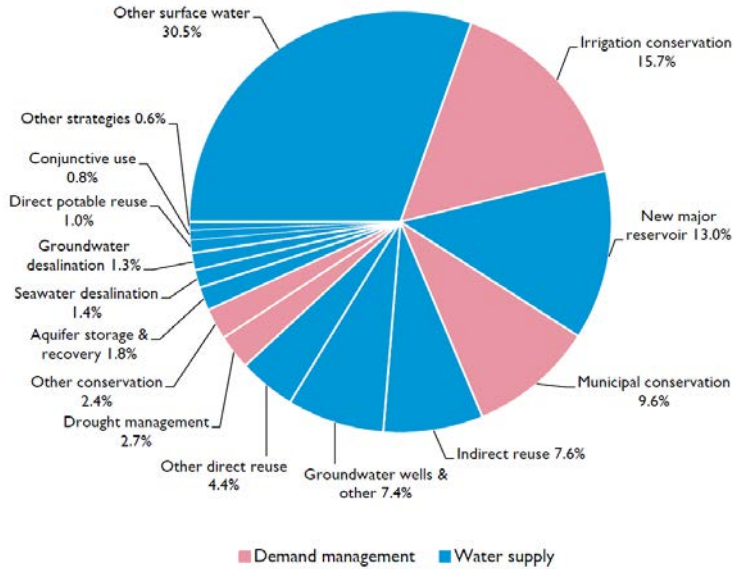
Planning group governance

- Have governing bylaws
- Elect officers
- Assign a political subdivision as administrator
- Receive funding from state to plan
- Hire technical consultants
- Adhere to open meetings act
- Decide on water management strategies
- Make recommendations to the legislature
- Texas Water Development Board assigns a project manager



14

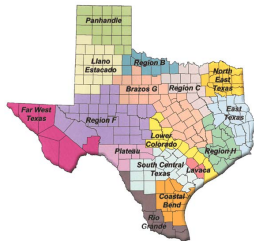
outcome = strategies



5,500 strategies would result in an additional 9.5 billion gallons per day of water

from the 2017 State Water Plan

15



Cost?

billions and billions!


~ \$63 billion




data from the 2017 State Water Plan

16

16



How much will it cost Texas if we do nothing?



billions and billions!

\$151 billion a year

6 x 151b = 0.9 tr

1.3 million jobs

data from the 2017 State Water Plan

17

implementation



- Up to locals to implement
- Tracked by planning groups and Texas Water Development Board (and in the plan)
- Funding from state and federal programs and local income and bonds
 - State Water Implementation Fund for Texas
- Public Private Partnerships (P3)

18

some success stories

- Survived the 2011-2015 drought!
- Relationship building
 - Midland, San Angelo, and Abilene
- Elevated water conservation
- Greater innovation
- Better data
- Political cover (“Is it in the plan?”)
- Bipartisanship
- Water in Texas = stakeholder processes
- State flood planning



19

some challenges

- Not all needs are met...
 - Agriculture has a 2.5 billion gallons per day shortfall
- Water for the environment
- Spilling the (water) beans...
- Not fully integrated
 - Flooding
 - Water quality
 - Equity
- The Hydro-illogical Cycle
- Small communities
- Climate change



20

“You got to be careful if you don't know where you're going, because you might not get there.”



- Yogi Berra

21

some resources

- See the state water plan!
 - <http://www.twdb.texas.gov/waterplanning/swp/2017/>
- See the regional water plans!
 - <http://www.twdb.texas.gov/waterplanning/rwp/plans/2016/>
- See the online plan!
 - <http://www.twdb.texas.gov/waterplanning/swp/>
- See the code!
 - <https://statutes.capitol.texas.gov/>
 - Chapter 16 of the Texas Water Code, Subchapter C

22



questions?

Robert E. Mace, Ph.D., P.G.
The Meadows Center for Water & the Environment
Texas State University
robertmace@txstate.edu
(512)245-6021
@MaceatMeadows

23