

Regional Water Planning in Texas

Introduction to the 5th Cycle

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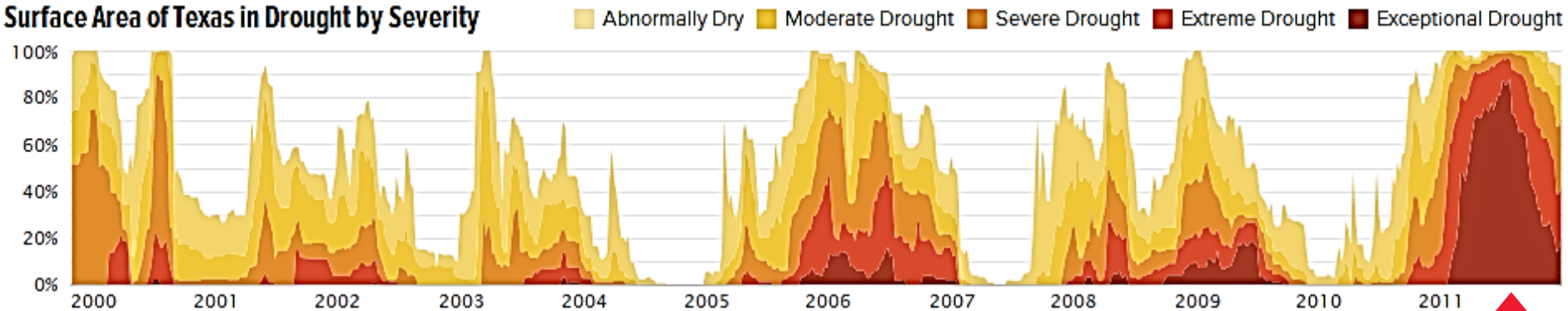
The following presentation is based upon professional research and analysis within the scope of the Texas Water Development Board's statutory responsibilities and priorities but, unless specifically noted, does not necessarily reflect official Board positions or decisions.

Overview

- Background on regional and state water planning in Texas
- Overview of regional water planning groups
- Fundamentals of water planning
- Foundation of the State Water Plan

Why do we plan?

Surface Area of Texas in Drought by Severity

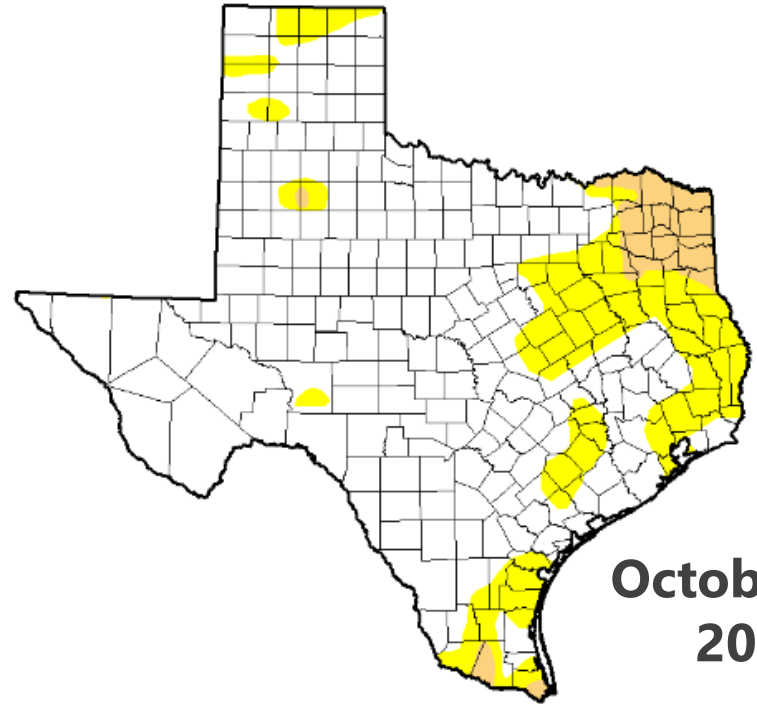


October 4, 2011



Types of Drought

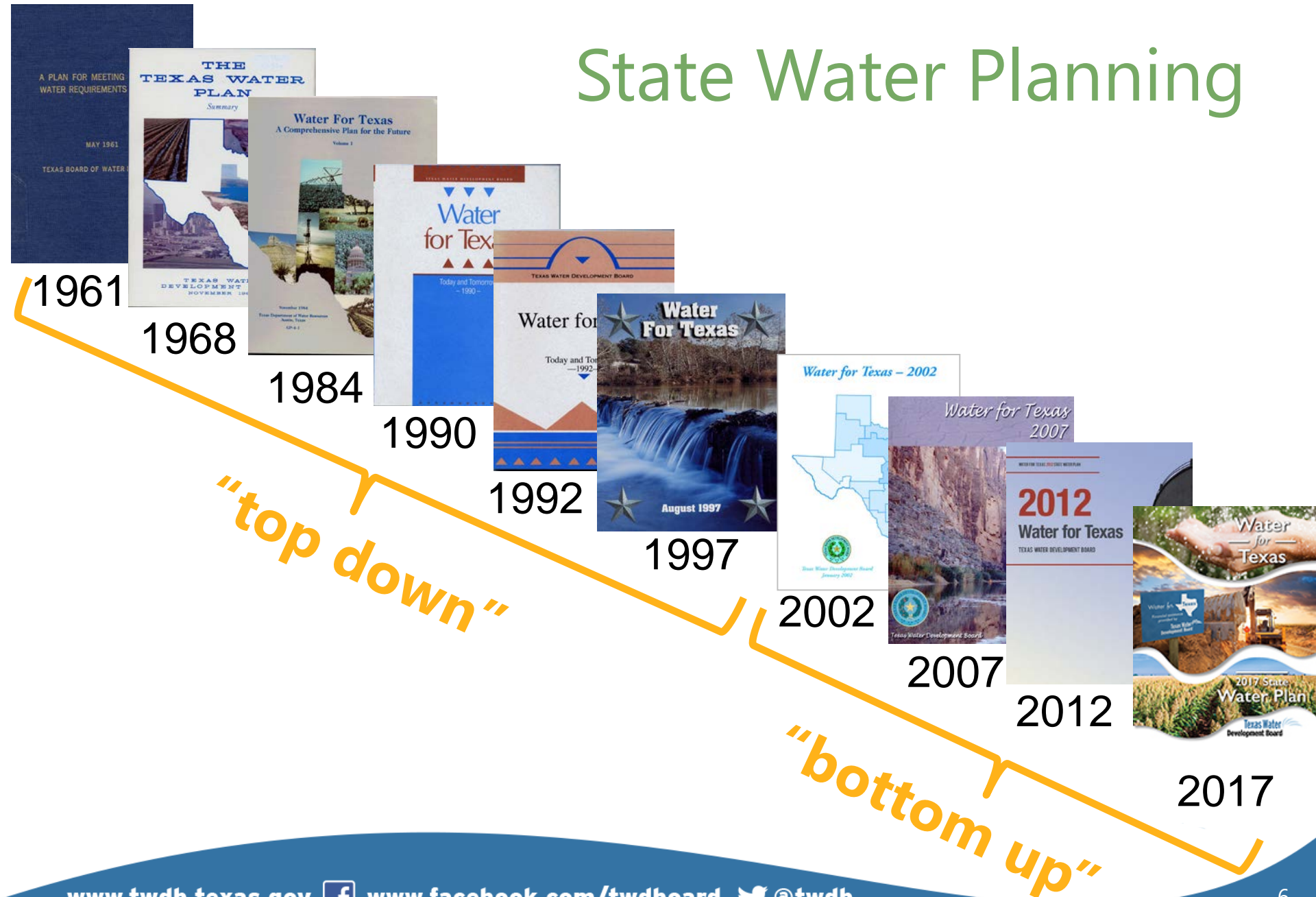
- Meteorological
- Agricultural
- Hydrological*
- Socioeconomic



**October 11,
2016**

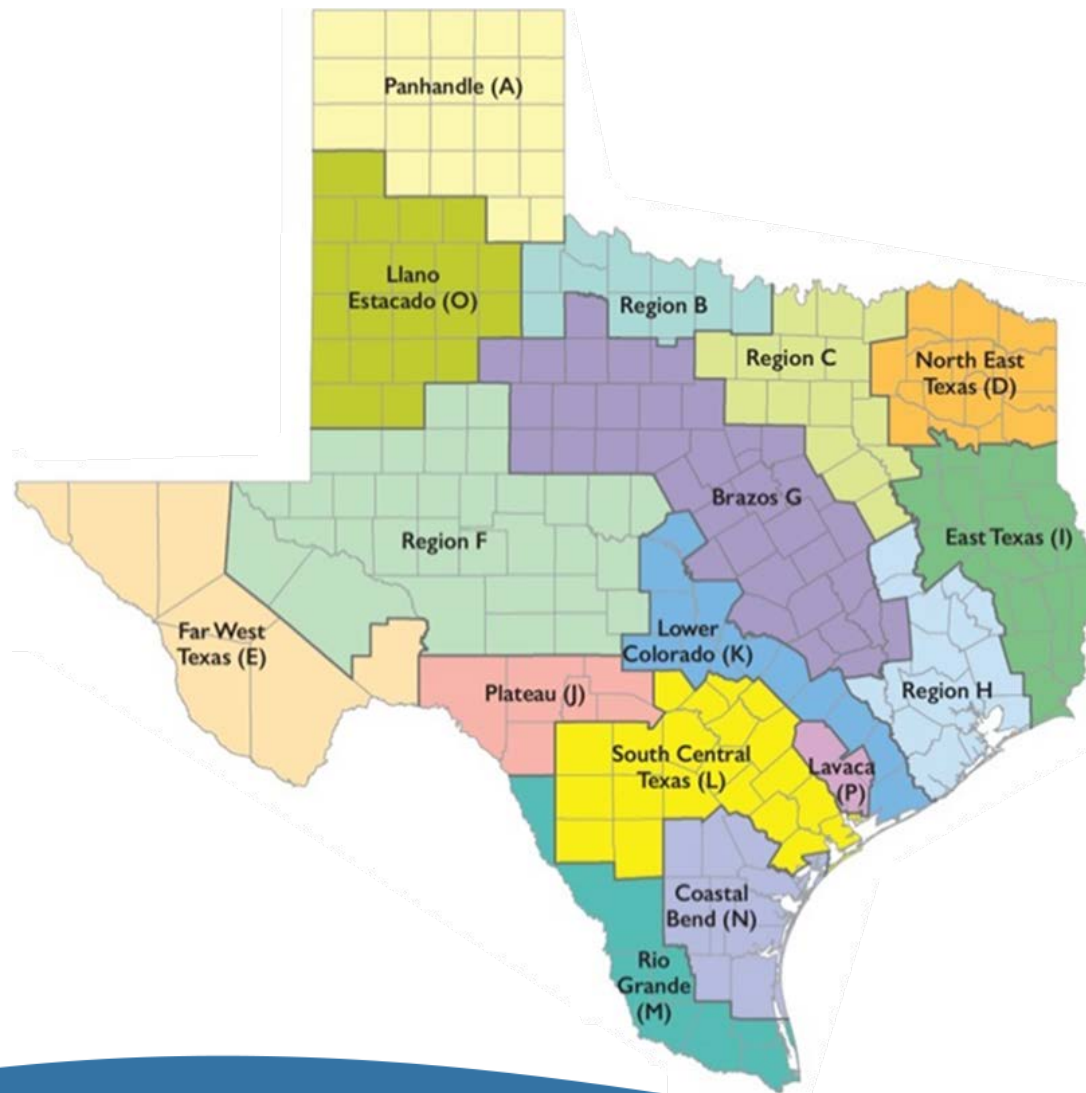
*regional water planning focuses on drought impacting water supplies

State Water Planning



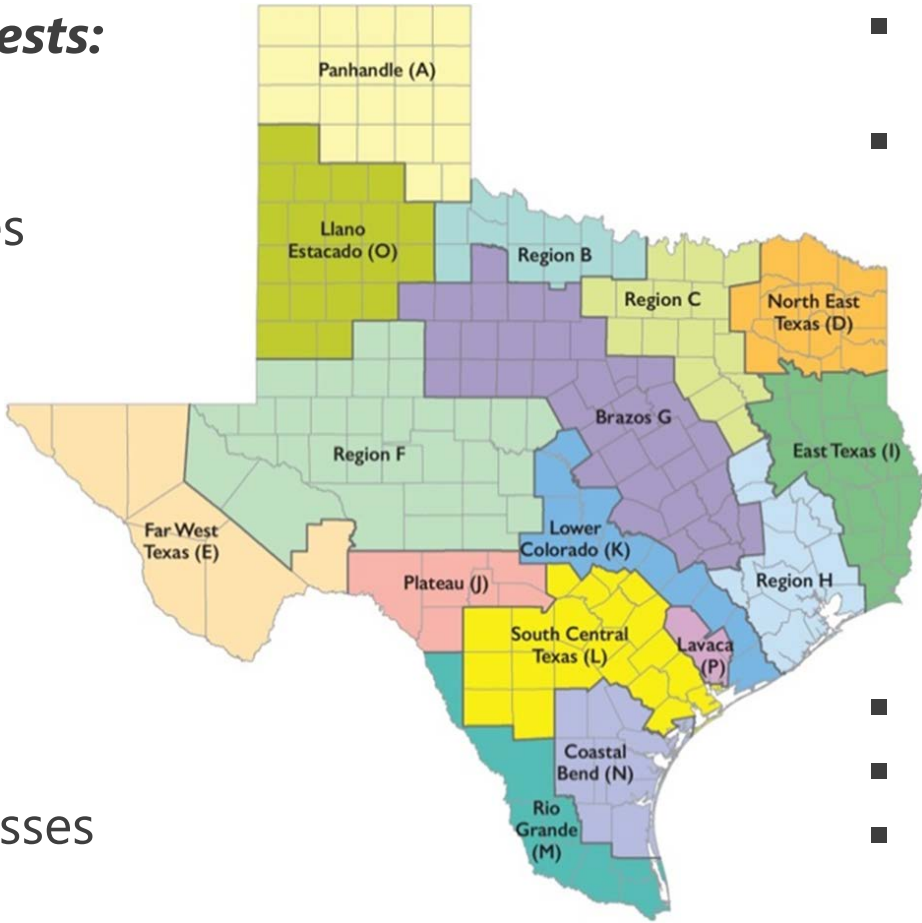
Overview of Regional Water Planning Groups

16 Regional Water Planning Areas



Voting Member Categories

Statutory interests:

- Public
 - Counties
 - Municipalities
- Electric-generating utilities
 - River authorities
- 
- The map of Texas is divided into 16 distinct regions, each color-coded and labeled with a letter in parentheses. The regions are: Panhandle (A) in yellow at the top; Llano Estacado (O) in olive green in the north-central area; Region B in light blue in the north-central area; Region C in light green in the north-central area; North East Texas (D) in orange in the northeast; Far West Texas (E) in light orange in the west; Region F in light green in the central area; Brazos G in purple in the central area; East Texas (I) in green in the east; Plateau (J) in pink in the south-central area; Lower Colorado (K) in blue in the south-central area; Region H in light blue in the southeast; South Central Texas (L) in yellow in the south-central area; Lavaca (P) in pink in the south-central area; Coastal Bend (N) in light blue in the south; and Rio Grande (M) in teal in the south.
- Industries
 - Agriculture
 - Environment
 - Small businesses
- Water districts
 - Water utilities
 - Groundwater management areas (varies by region)

There are approximately 370 voting members in the 16 groups

Key Responsibilities of Planning Group Members

- Represent interest category and region
- Develop a plan that serves region and state
- Consider local water plans
- Ensure adoption of a regional water plan by the statutory deadline that meets all requirements

How do planning groups function?

- Select a host political subdivision
- Select technical consultants
- Self-govern (maintain own bylaws and membership)
- Hold regular public meetings and sub-group meetings as necessary
- Consider stakeholder input and make decisions in accordance with bylaws

Roles



Public



Legislature

TWDB

16 Regional Water Planning Groups

16 technical consultants

16 political subdivisions

CONTRACTS

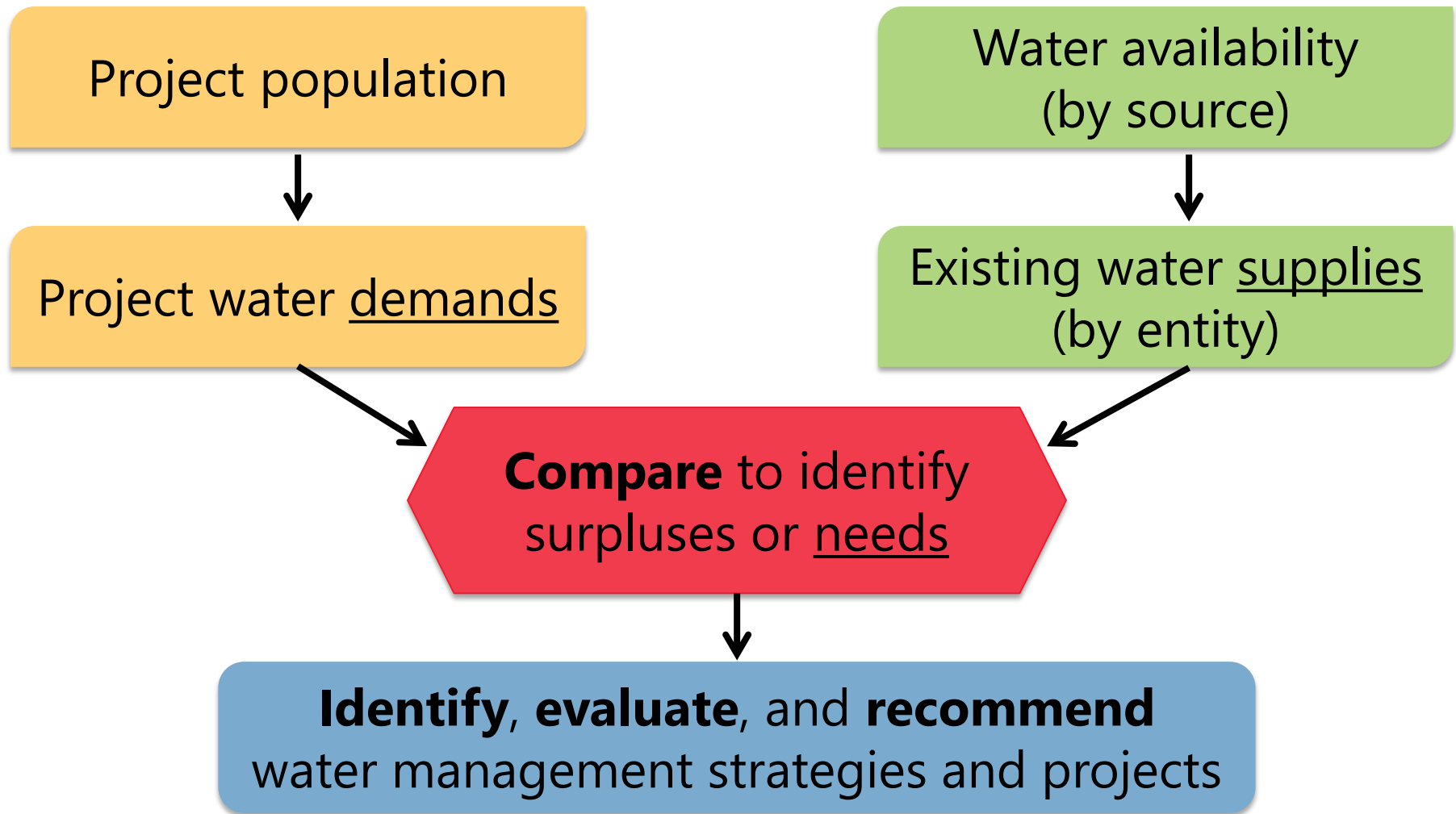
Incentives to Participate

- TWDB funding
- TCEQ permitting



Fundamentals of Water Planning

Water Planning Basics



Basic Planning Parameters

- Meet **drought of record** water needs
- 50-year planning horizon
- 5-year planning cycle
- 6 categories of water use: municipal, manufacturing, mining, irrigation, livestock, and steam-electric power
- Geographic breakdown of water user group information by county, river basin, and region

Planning Units & Key Terms

- **Drought of Record (DOR)** = period of time when historical records indicate that natural hydrological conditions would have provided the least amount of water supply
- Data is **decadal** (over 50 year period)
- Water volumes are in **acre-feet**
(1 acre-foot = 325,851 gallons)
- **Water User Group** = "WUG"
- **Wholesale Water Provider** = "WWP"
- **Major Water Provider** = "MWP"

Key Planning Terminology

Water Management Strategy (WMS) = a plan to meet a need for additional water by a discrete **WUG**, through increasing total water supplies or maximizing existing supplies, including through reducing demands

Water Management Strategy Project (WMSP) = a water project that has a capital cost and when implemented, would develop, deliver, or treat additional water supplies or conserve water for **WUGs** or **WWPs**

Path to Recommending Strategies and Associated Projects

- **identify** “potentially feasible” strategies and projects
- **evaluate** potentially feasible strategies and projects
- **compare** evaluated strategies and projects
- **recommend** strategies and projects that are “cost-effective and environmentally sensitive” 31 TAC 357.35(b)

Potentially Feasible Water Management Strategies*

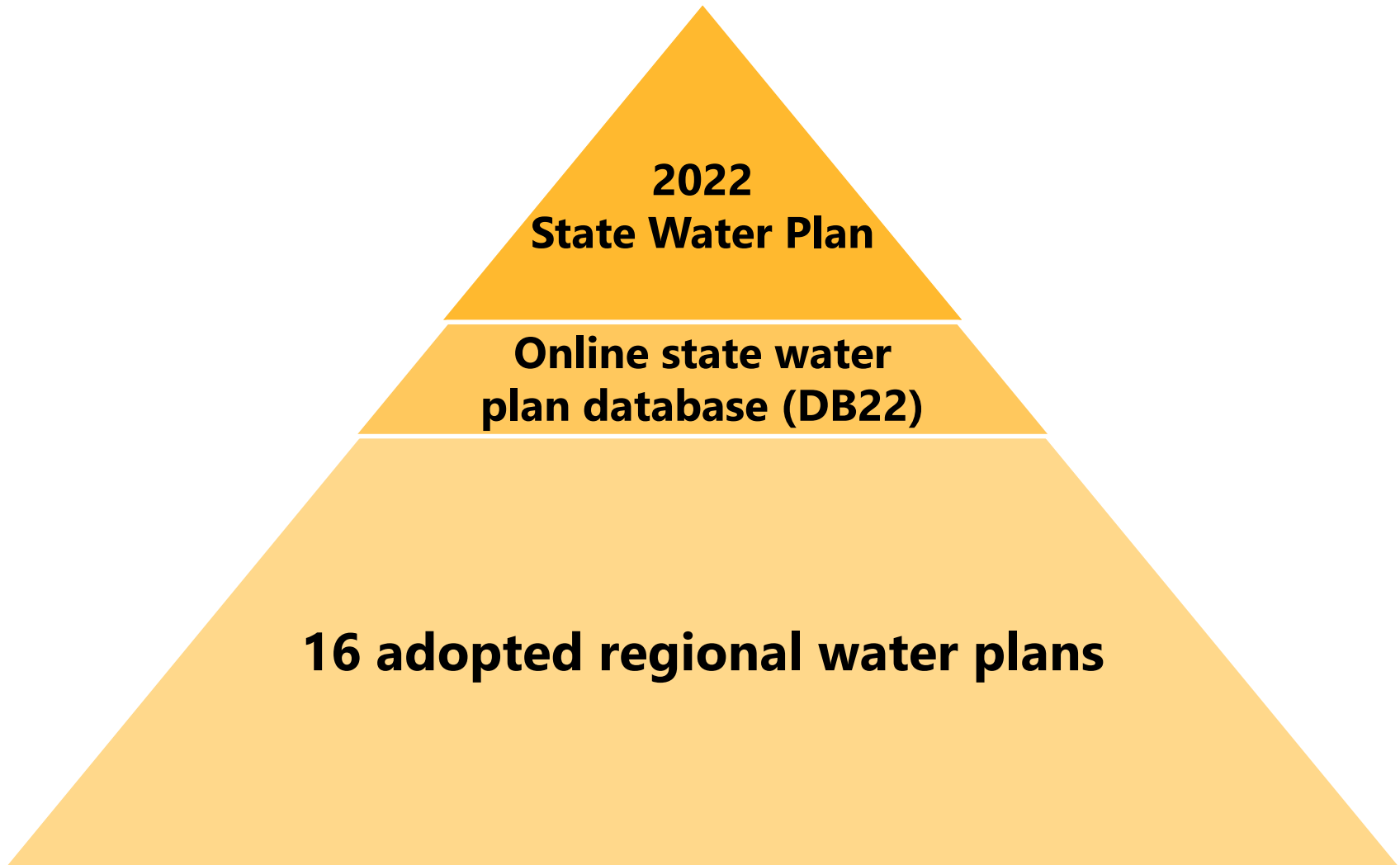
- WMS's that must be considered:
 - Expanded use of existing supplies
 - New supply development
 - Conservation and drought management measures
 - Reuse of wastewater
 - Interbasin transfers of surface water
 - Emergency transfers of surface water
- Water conservation and drought management measures must be considered for every water user group with an identified water need

Prioritization of Projects

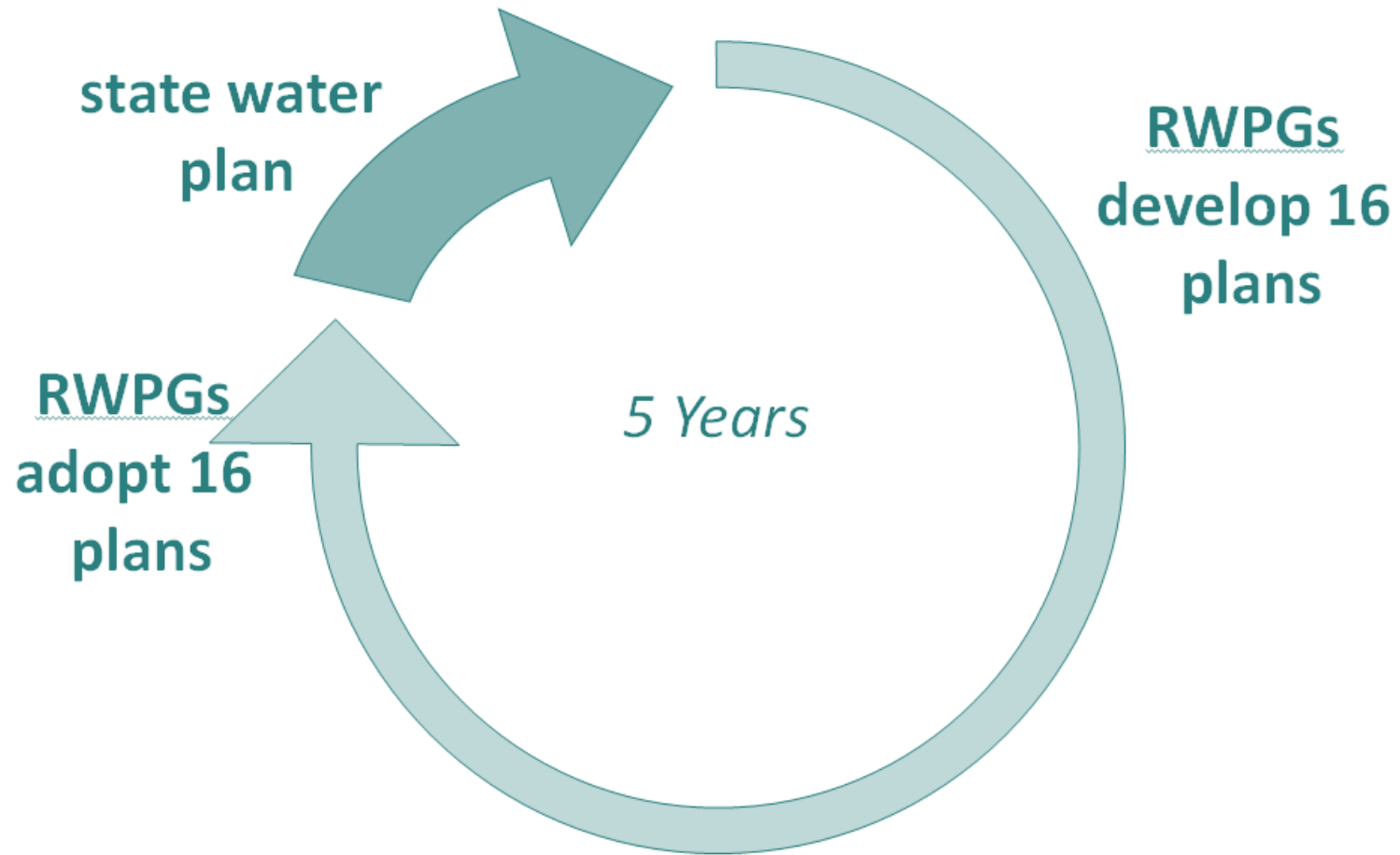
- Regional and state level prioritization of WMSPs are required by SWIFT Legislation
- Each recommended WMSP must be prioritized
- Regional prioritization based on uniform standards developed by stakeholder committee (RWPG Chairs)
- State prioritization system based on statute and TWDB administrative rules

Foundation of the State Water Plan

Bottom Up Approach



Regional & State Planning Cycles



Snapshot of the 2017 State Water Plan

5,500 strategies



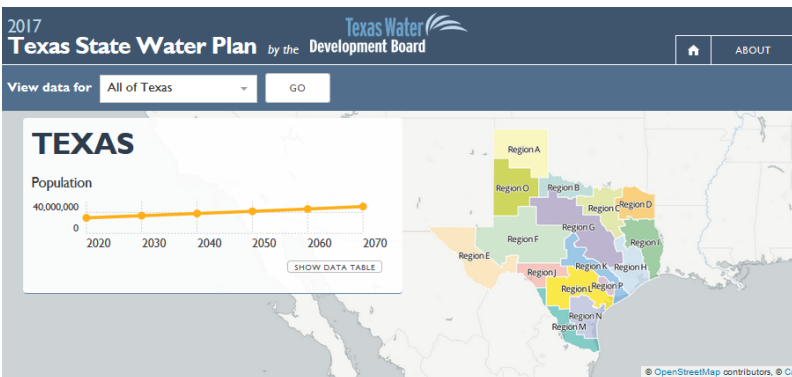
2,500 projects



Capital cost of **\$63** billion



The State Water Plan is Online and Interactive

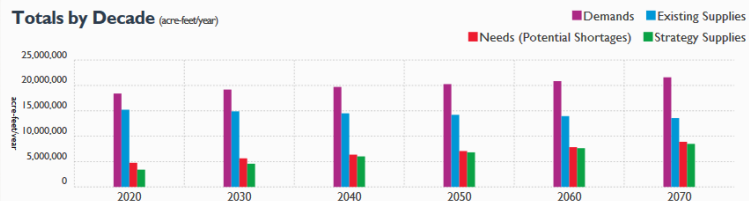


Development of the state water plan is central to the mission of the Texas Water Development Board. Based on 16 regional water plans, the plan addresses the needs of all water user groups in the state – municipal, irrigation, manufacturing, livestock, mining, and steam-electric power – during a repeat of the drought of record that the state suffered in the 1950s. The regional and state water plans consider a 50-year planning horizon: 2020 through 2070.

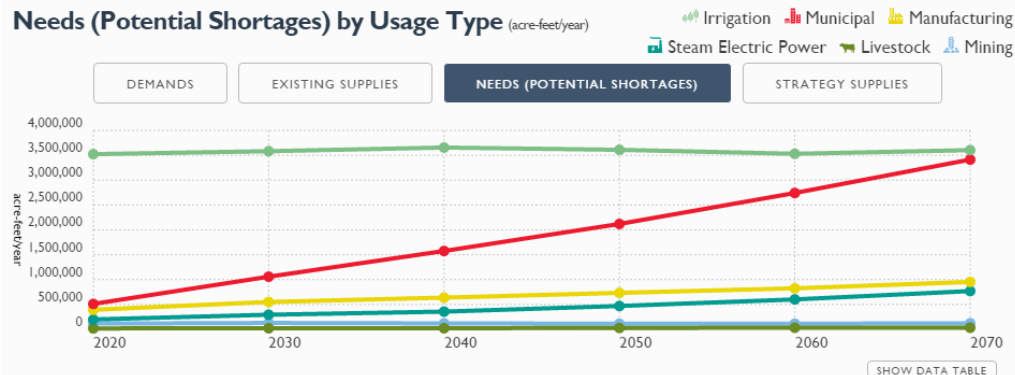
This website lets water users statewide take an up-close look at data in the 2017 State Water Plan and how water needs change over time by showing:

- projected water demands,
- existing water supplies,
- the relative severity and projected water needs (potential shortages),
- the water management strategies recommended to address potential shortages, and
- recommended capital projects and their sponsors.

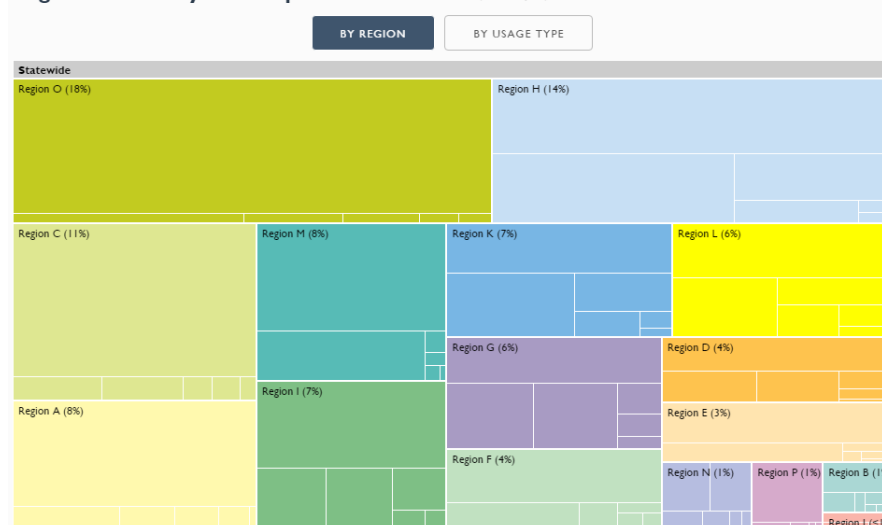
Totals by Decade (acre-feet/year)



Needs (Potential Shortages) by Usage Type (acre-feet/year)



Regional Summary Treemap - 2040 - Demands (acre-feet/year)



<http://texasstatewaterplan.org>

Questions?

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