

# *Regional Water Planning in Texas*

## **Introduction to the 5<sup>th</sup> Cycle**

---

### **Sarah Backhouse**

Manager, Regional Water Planning  
Water Use, Projections, & Planning  
Texas Water Development Board

*Presented at the Region O RWPG meeting  
August 22, 2017*

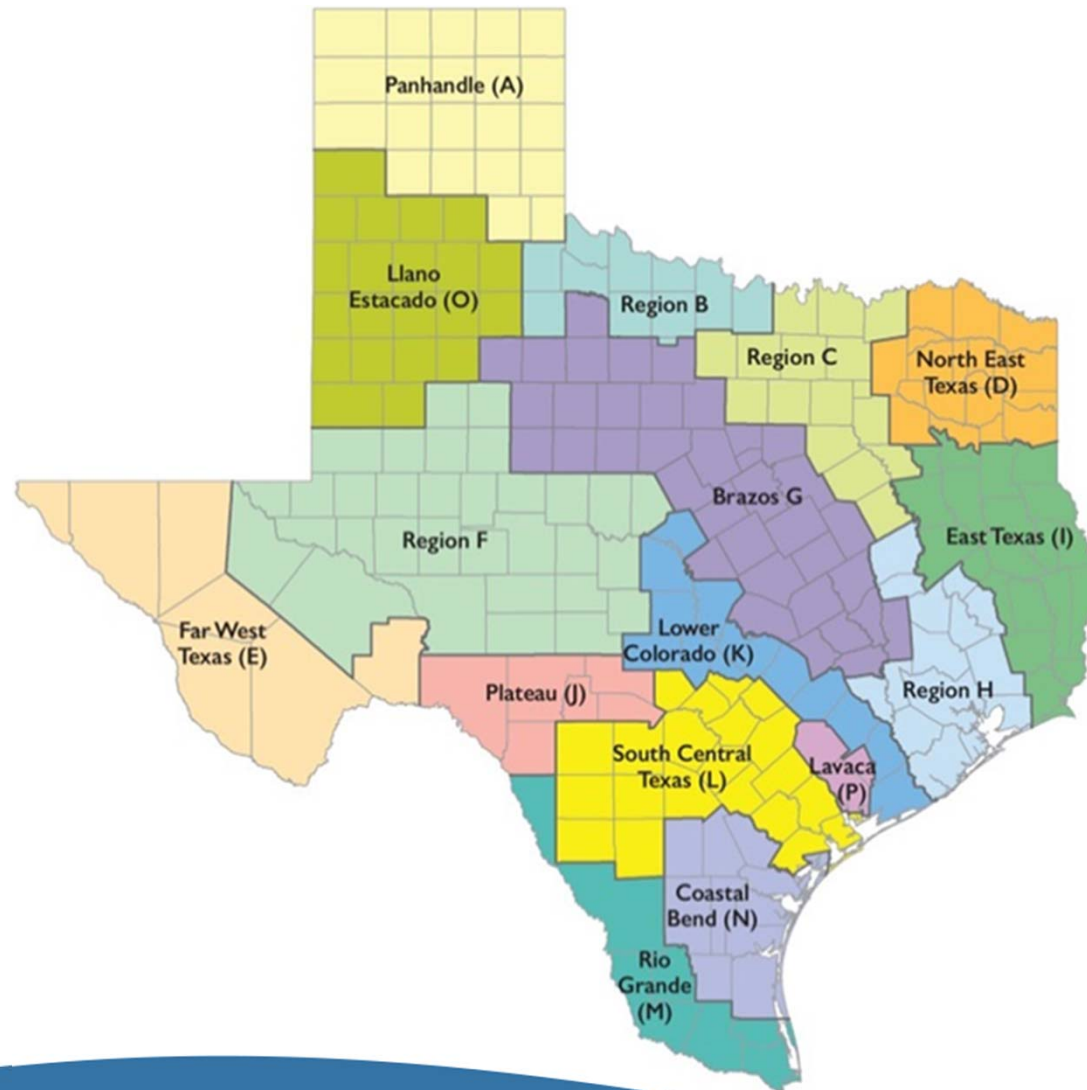
The following presentation is based upon professional research and analysis within the scope of the Texas Water Development Board's statutory responsibilities and priorities but, unless specifically noted, does not necessarily reflect official Board positions or decisions.

# Overview

- Overview of regional water planning groups
- Fundamentals of water planning
- Foundation of the State Water Plan

# Overview of Regional Water Planning Groups

# 16 Regional Water Planning Areas





Diverse  
interest groups  
represented

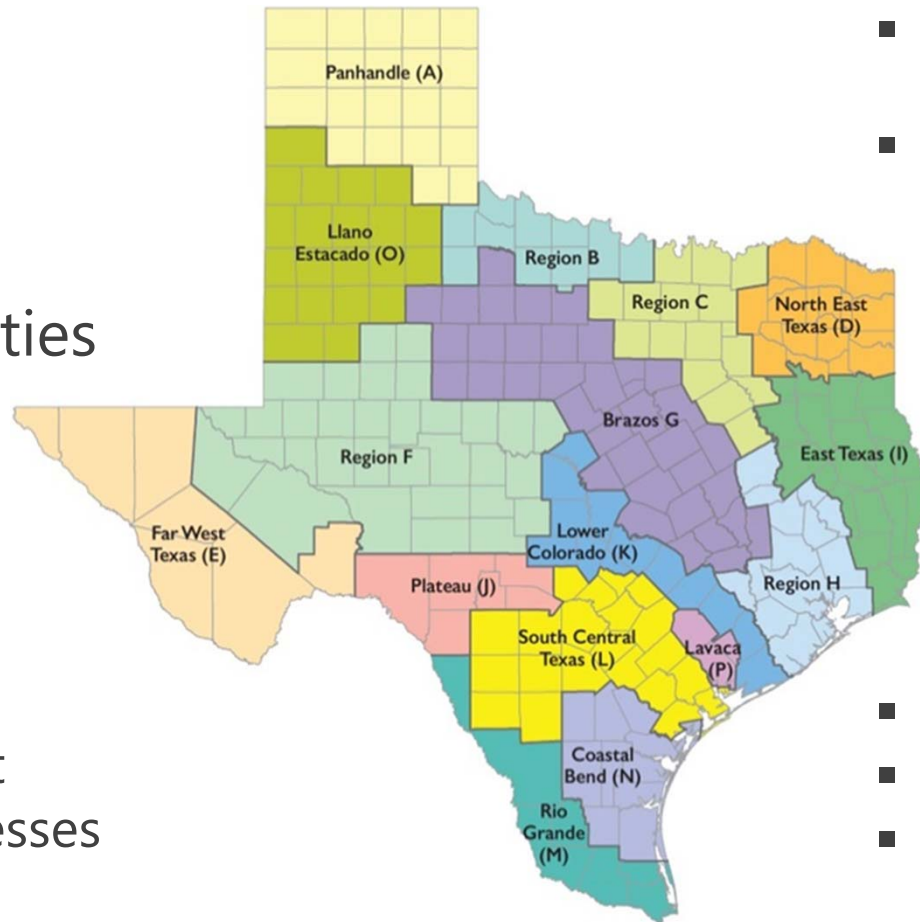


# Voting Member Categories

## **Statutory interests:**

- Public
- Counties
- Municipalities

- Industries
- Agriculture
- Environment
- Small businesses



- Electric-generating utilities
- River authorities

- 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
- Become informed on items the planning group is asked to make decisions on
- 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
- Complete the Office of Attorney General Open Meetings Act and Public Information Act training (*TWDB interpretation of SB 347*)



# 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

# Public Notice Requirements

- Subject to Texas Open Meetings Act
- Follow significant public notice requirements (requirements vary depending on activity)
- Must hold initial preplanning public meeting for input on the next plan
- Must present how the planning group will identify potentially feasible water management strategies at a public meeting

# Funding the Planning Process

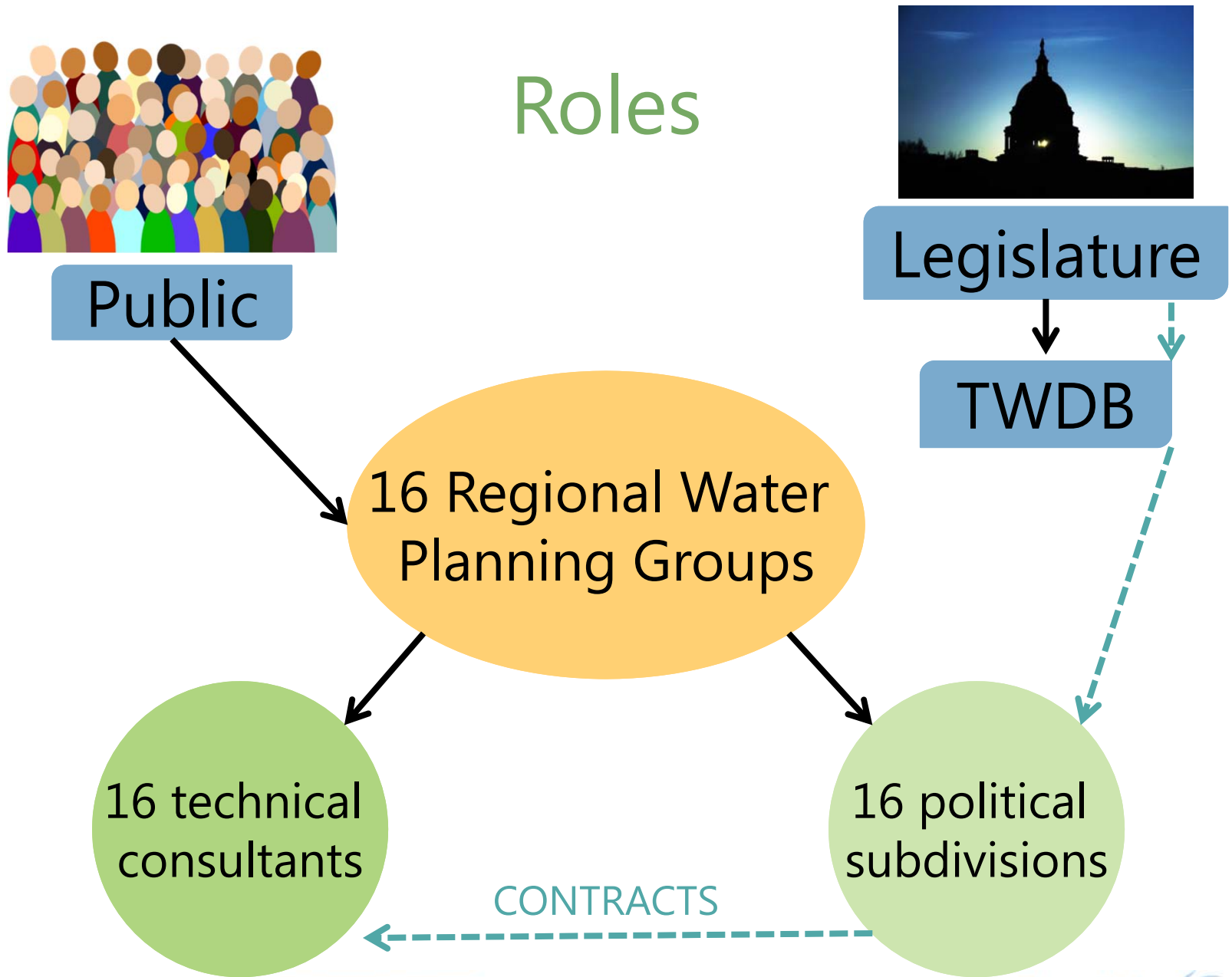
- Legislative appropriations
- Political subdivisions apply for funding on behalf of the RWPG (based on 5-year cycles)
- Funding through TWDB contract with political subdivision
- Political subdivisions subcontract with technical consultants
- RWPGs direct work of consultants

# Relevant Documents

- Statute
- Administrative rules
- Contract Scope of Work/Task budget
- Contract Exhibit C – general guidelines for regional water plan development
- Contract Exhibit D – guidelines for data deliverables

[http://www.twdb.texas.gov/waterplanning/rwp/planningdocu/2021/current\\_docs.asp](http://www.twdb.texas.gov/waterplanning/rwp/planningdocu/2021/current_docs.asp)

# Roles



# Fundamentals of Water Planning

# 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

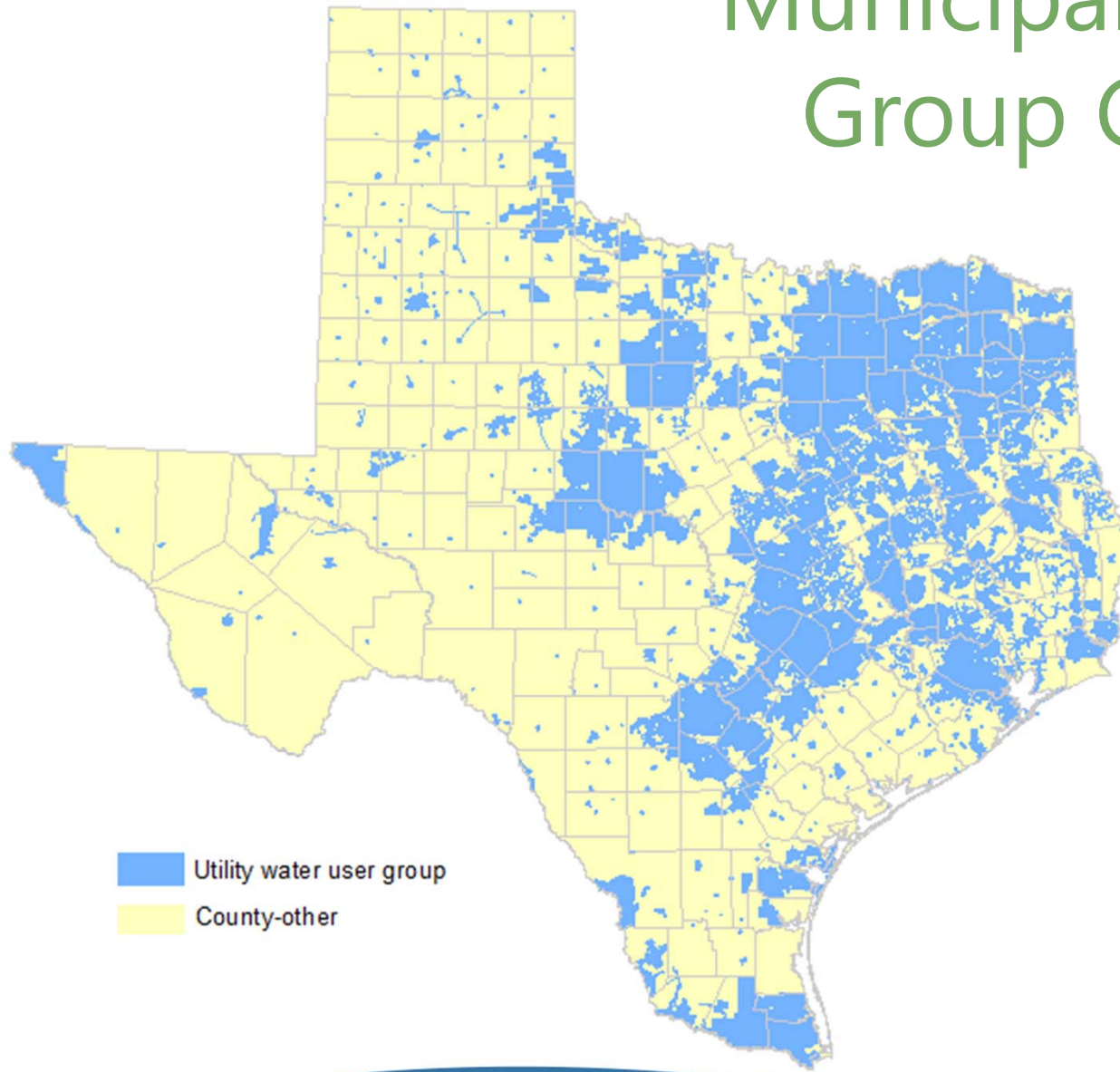
- **Drought of Record (DOR)** = period of time when historical records indicate that natural hydrological conditions would have provided the least amount of water supply
- Data is **decadal** (over 50 year period)
- Water volumes are in **acre-feet** (*1 acre-foot = 325,851 gallons*)
- **Water User Group**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

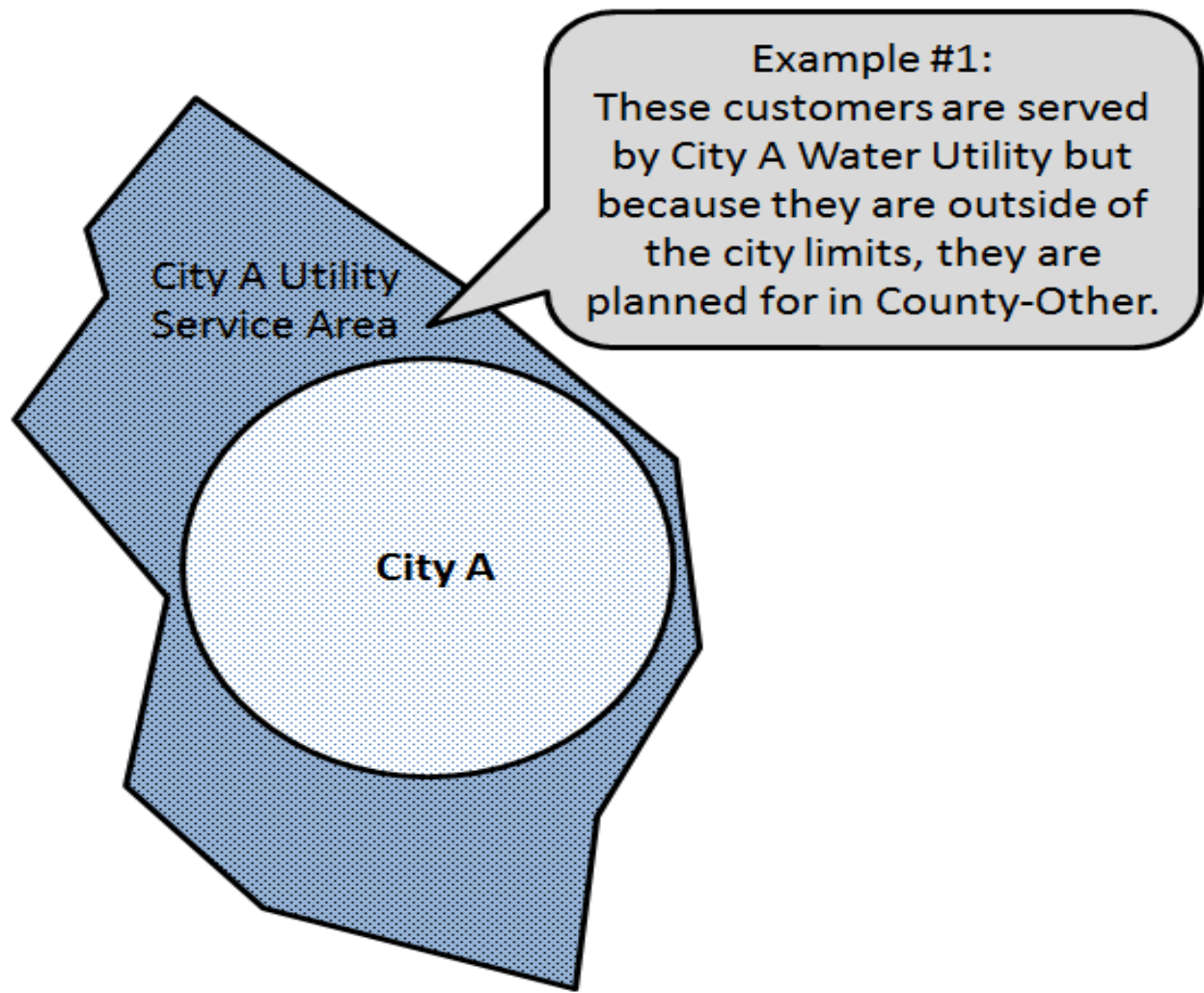


# WUGs in the 2016 Regional Water Plans

<b>Demand Category</b>	<b>Number of WUGs</b>
<b><i>Municipal WUGs</i></b>	
Cities & Utilities	1,364
County-Other	254
<b><i>Non-municipal WUGs</i></b>	
Manufacturing	183
Mining	228
Steam-Electric Power	85
Irrigation	241
Livestock	254
<b>Total number of WUGs</b>	<b>2,609</b>

# Municipal Water User Group Categories





# Key Planning Terminology

**Availability\*** = maximum amount of raw water that could be produced by a source during a repeat of the **DOR**

**Existing Supply\*** = maximum amount of water that is physically and legally accessible for immediate use by a **WUG** under a repeat of **DOR** conditions

\*See handout page 1: Section 6.1 from the 2017 State Water Plan

# Key Planning Terminology

**Demand** = volume of water required to carry out the anticipated domestic, public, and/or economic activities of a **WUG** during drought conditions

**Need** = a potential water supply shortage, based on the difference between water demands and existing water supplies (can be met by implementing recommended water management strategies)

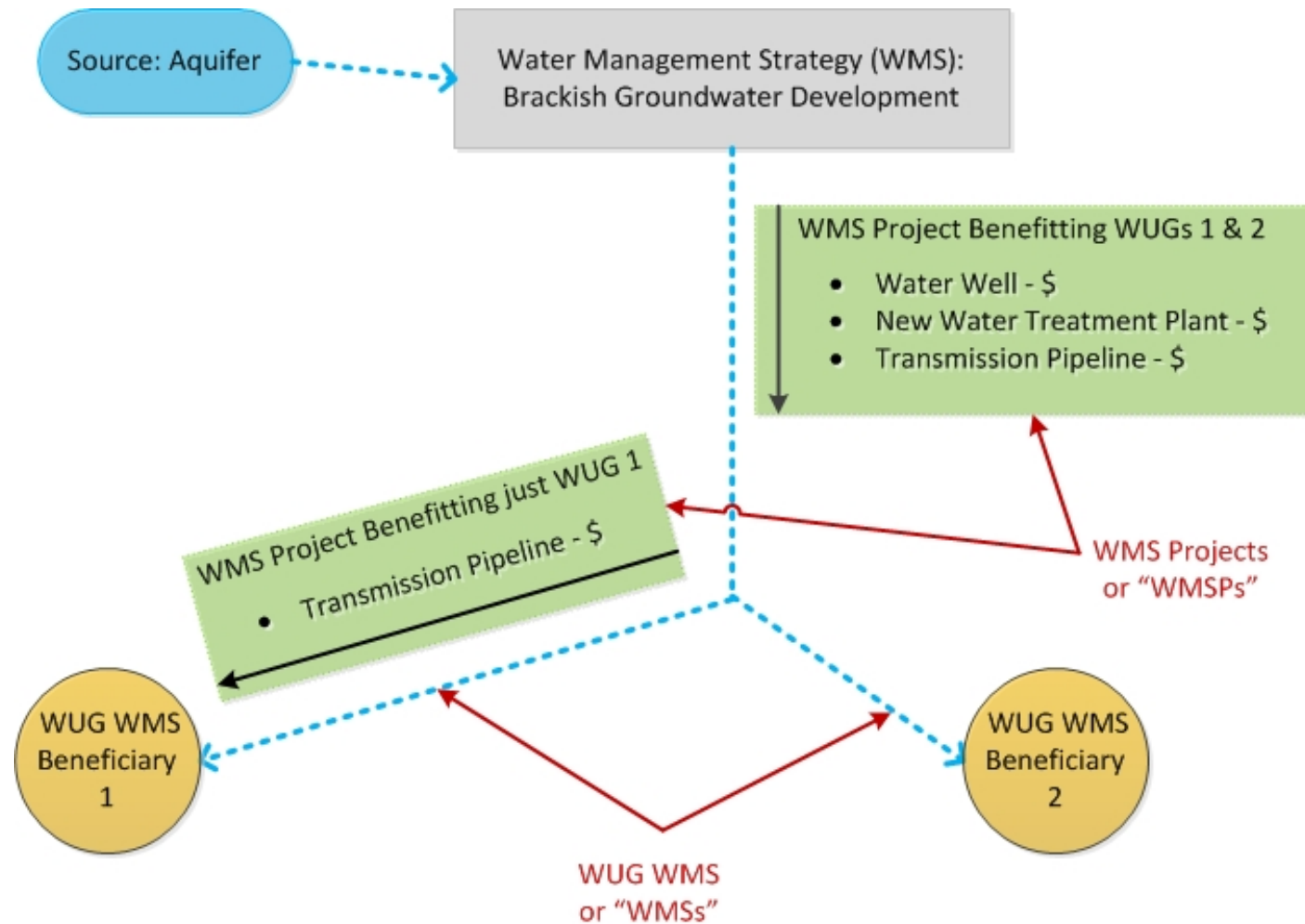
**Unmet Need** = the portion of an identified water need that is not met by recommended water management strategies

# Key Planning Terminology

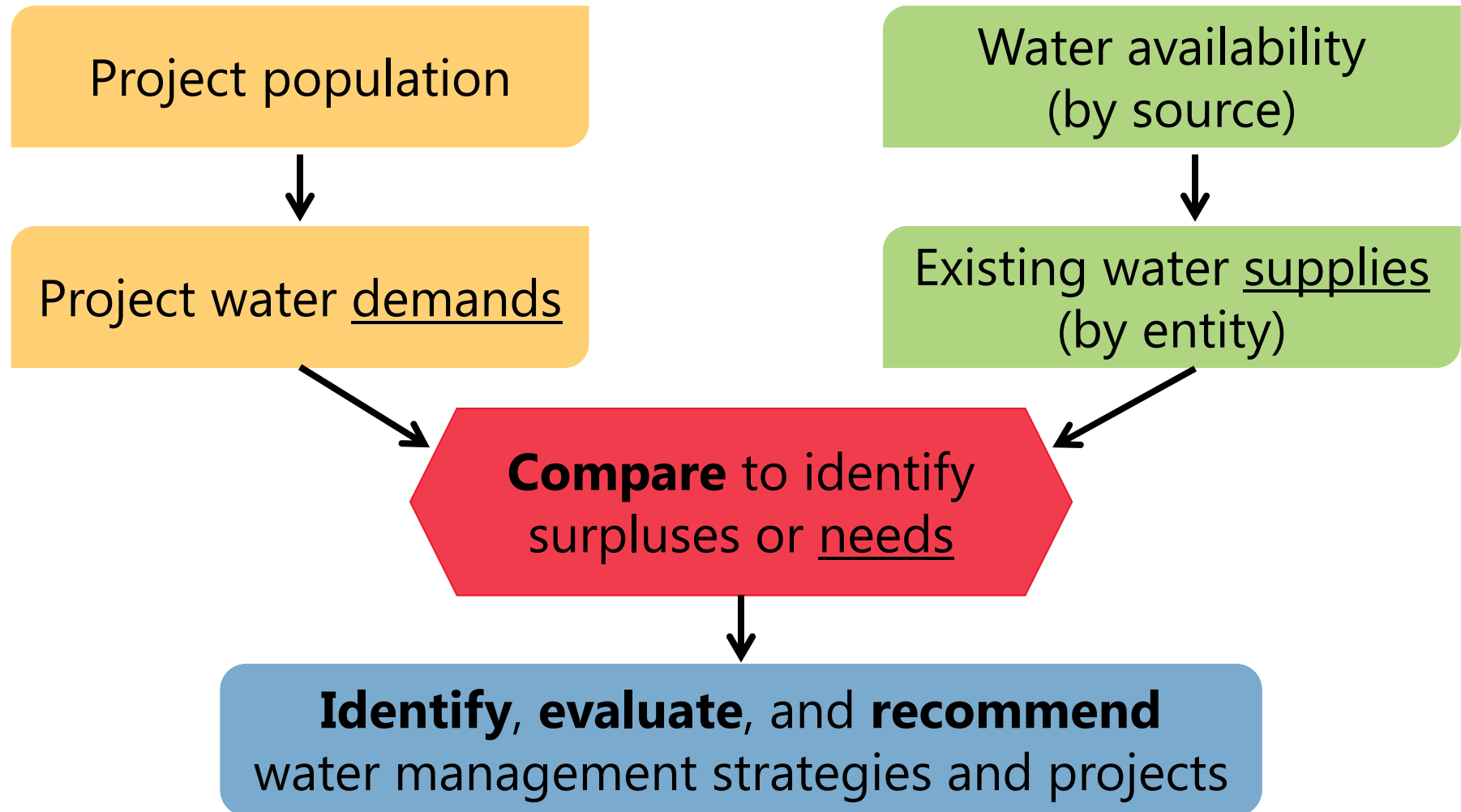
**Water Management Strategy (WMS)** = a plan to meet a need for additional water by a discrete **WUG**, through increasing total water supplies or maximizing existing supplies, including through reducing demands

**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**

# Water Management Strategy vs. Project



# Water Planning Basics





# 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

\*See handout page 2: List of potentially feasible WMSs required to be considered

# Evaluation of Strategies and Associated Projects

- Evaluations are based on:
  - water quantity and reliability
  - financial costs
  - impacts to environment and agriculture
  - impacts to water quality
  - other factors such as regulatory requirements, time required to implement, etc.

# 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

# Regional Planning Deliverables

- Standard contract tasks associated with 11 Chapters
- Populate State Water Plan database (DB22)
- Report documents: Technical Memorandum, Initially Prepared Plan, and Final Plan
- List of prioritized projects

# Standard RWP Chapters

1. Planning area description
2. Population and water demand projections
3. Water supply analysis
4. Identification of water needs
5. Water management strategies and projects
6. Impacts of plan and consistency with protection of the State's water, agricultural, and natural resources

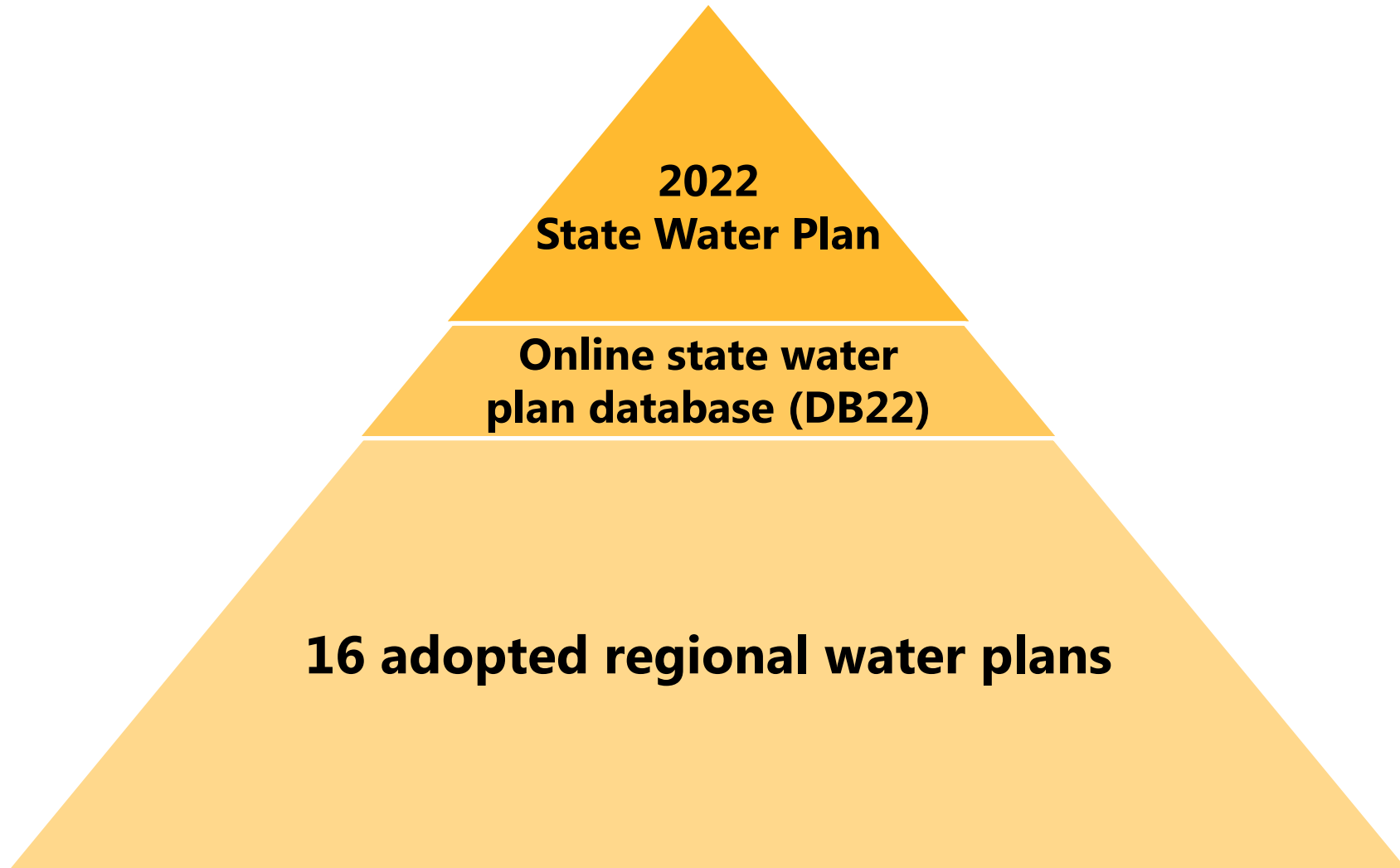
# Standard RWP Chapters (cont.)

7. Drought response information, activities, and recommendations
8. Unique stream segments, unique reservoir sites, and policy recommendations
9. Infrastructure financing analysis
10. Adoption of plan
11. Implementation and comparison to previous regional water plan

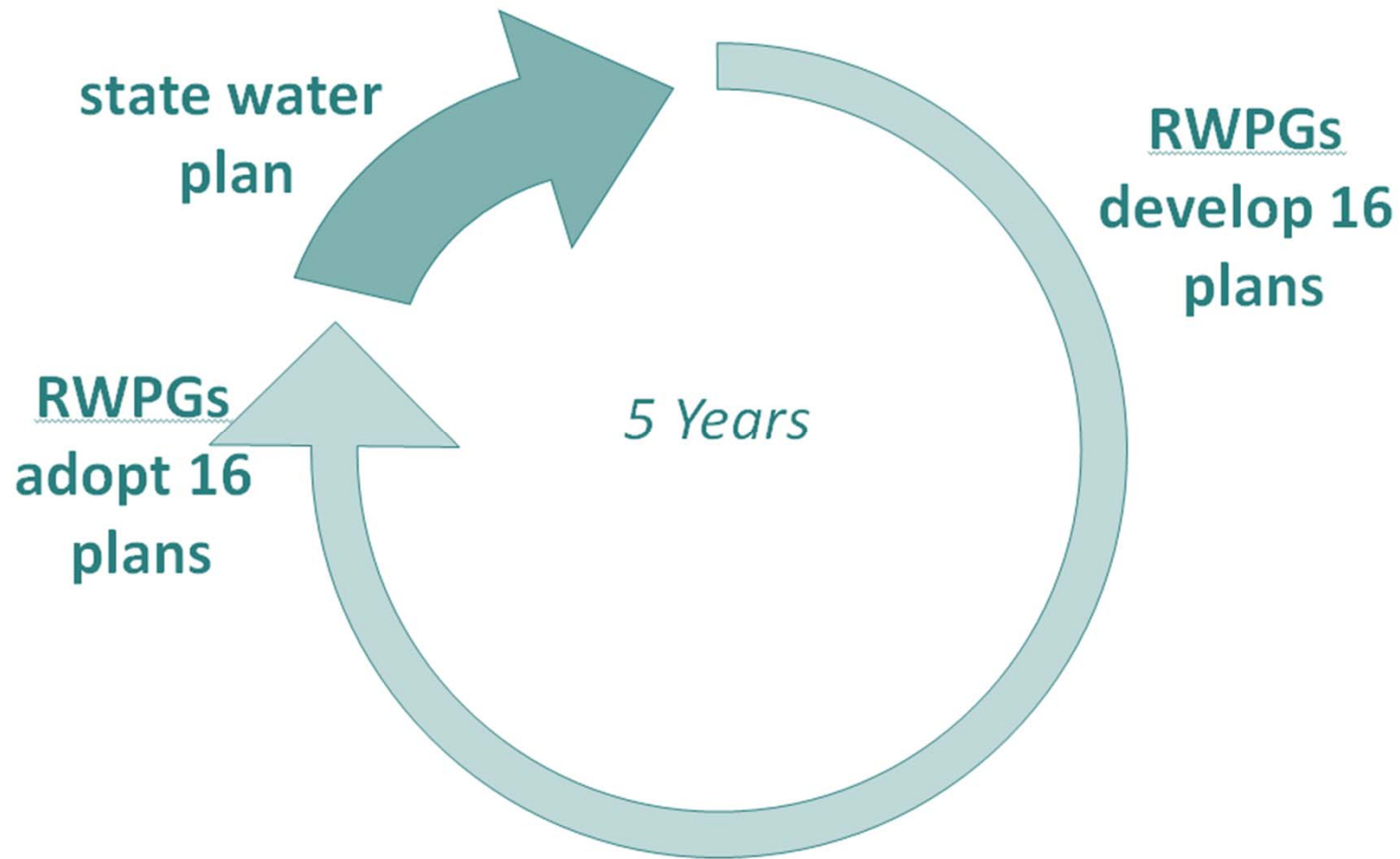
# Foundation of the State Water Plan



# Bottom Up Approach



# Regional & State Planning Cycles



# Audience

- The State Water Plan is delivered to the Governor, the Legislature, and the public
- Key aspects for their consideration:
  - Long-term projections of water supplies, demands, and needs
  - Project costs and funding needs
  - Policy recommendations



# Questions?

---

## **Sarah Backhouse**

Manager, Regional Water Planning  
Water Use, Projections, & Planning  
Texas Water Development Board  
[Sarah.Backhouse@twdb.texas.gov](mailto:Sarah.Backhouse@twdb.texas.gov)