Texas Regional and State Water Planning

August 2014 |Temple McKinnon

TWDB Regional Water Planning

Texas Water Development Board

“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.”

Regional & State Water Planning

- *Background on regional planning*
- *Overview of process*
- *Summarize content of regional plans*
- *Online State Water Plan*

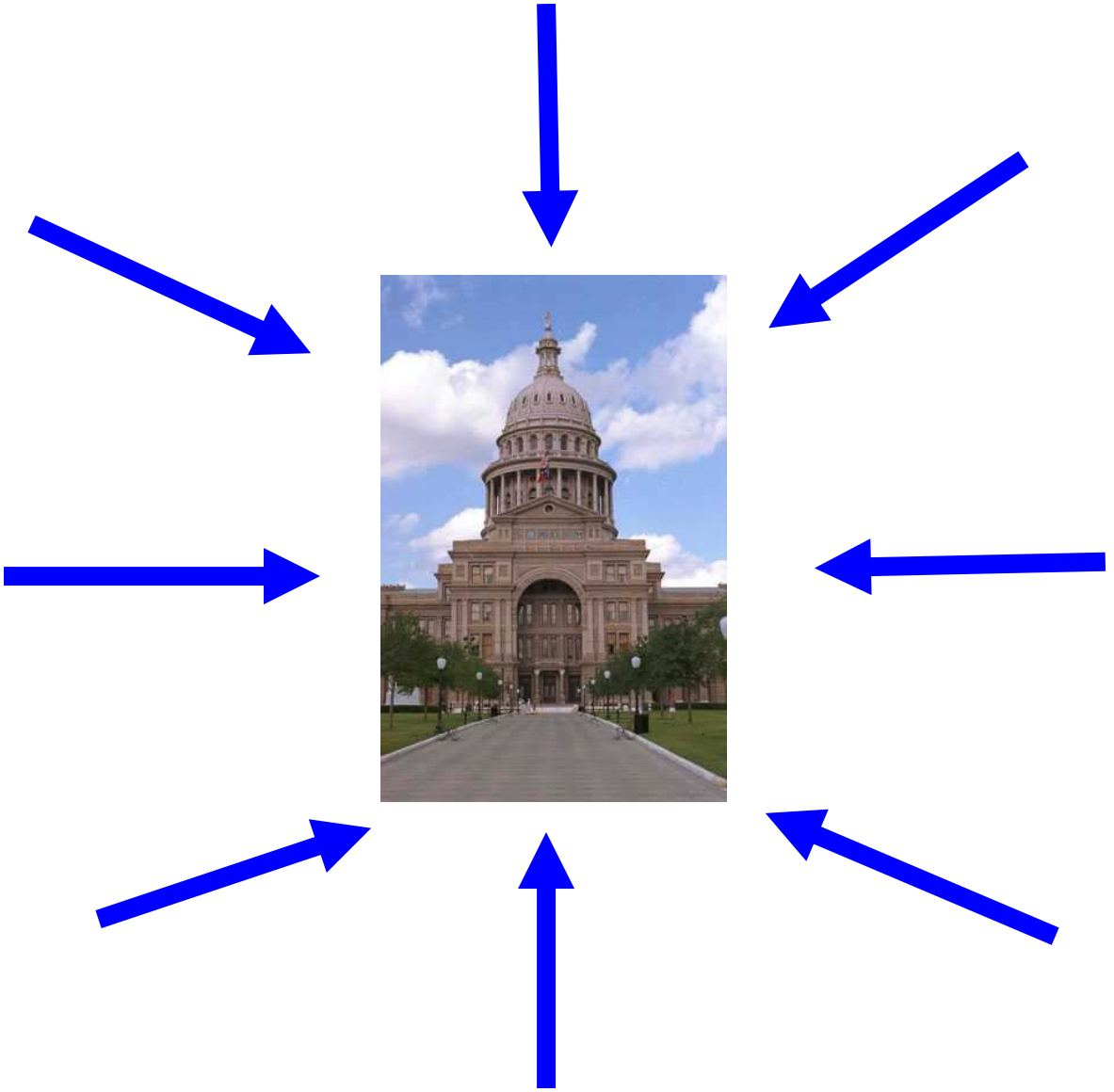
TWDB was created in 1957 to:

- Provide water project funding
- Prepare state water plans

(Major shift with Senate Bill 1 in 1997)

Water Planning Prior to SB 1

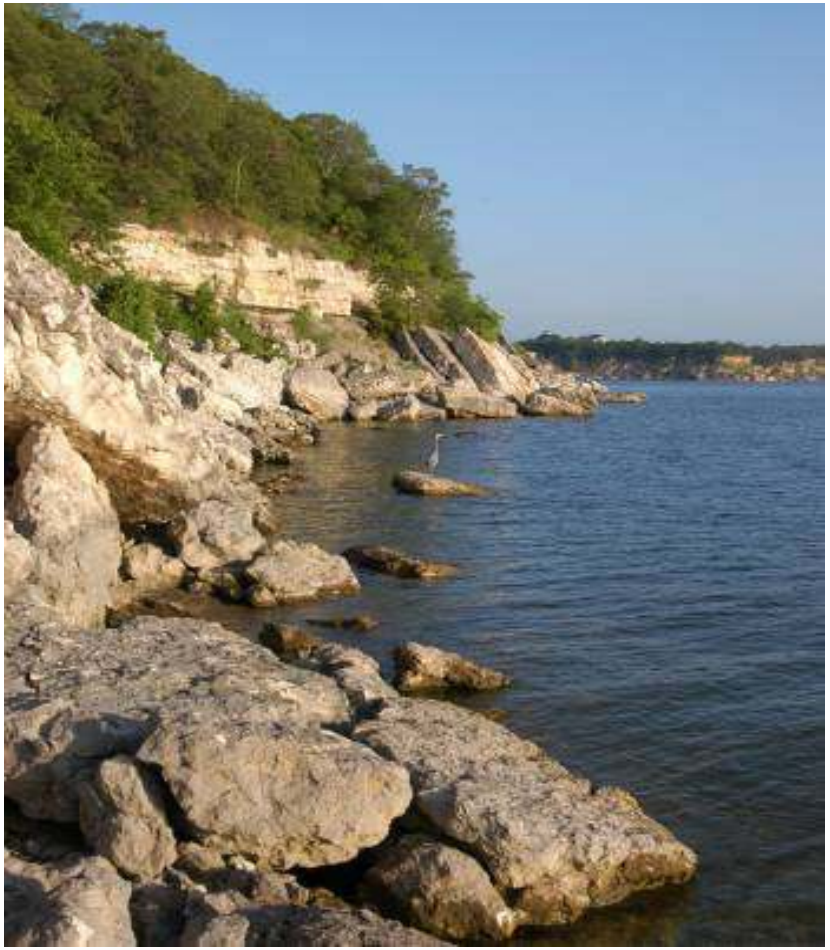
Water Planning Post SB 1



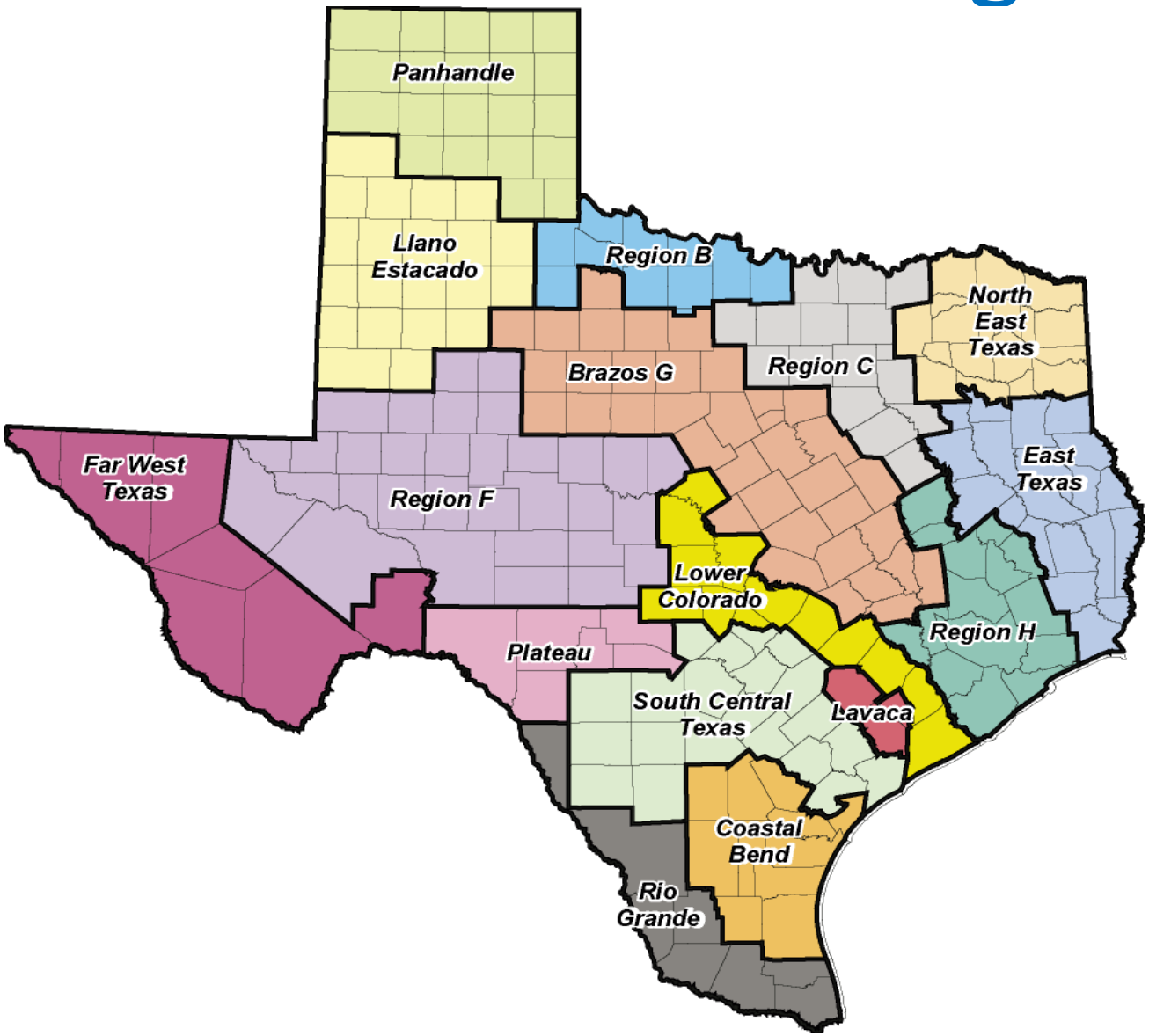
Incentives

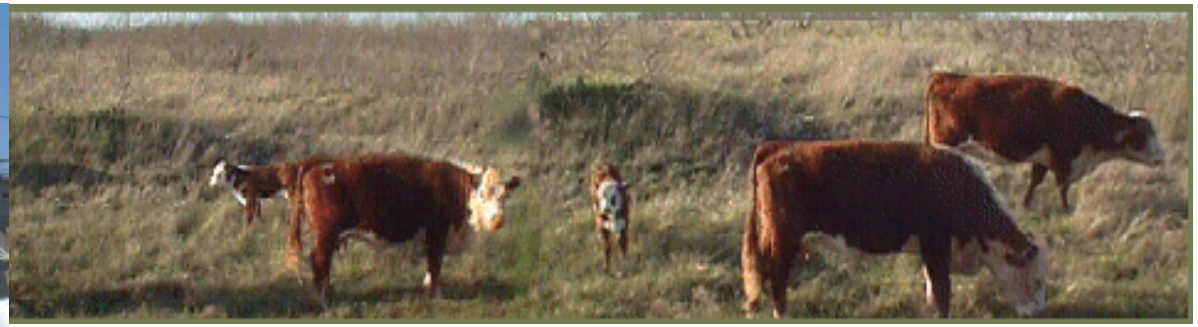
TWDB funding

TCEQ surface water right permits



16 Planning Regions





Diverse Interest Groups Represented

Regional Planning Groups

- **Local Political Subdivision serves as administrator**
- **Public, consensus-driven; local/regional decision making process**
- Statutory interests:
  - Public
  - Counties
  - Municipalities
  - Industries
  - Agriculture
  - Environment
  - Small business
  - Electric generating utilities
  - River authorities
  - Water districts
  - Water utilities
  - GMAs (new Sept. 2011, SB660)

Key Responsibilities of Regional Planning Group Members

a) Represent interest category and region

b) Develop plan that serves entire region

c) Consider local water plans

d) Ensure adoption of a regional water plan by the statutory deadline that meets all requirements

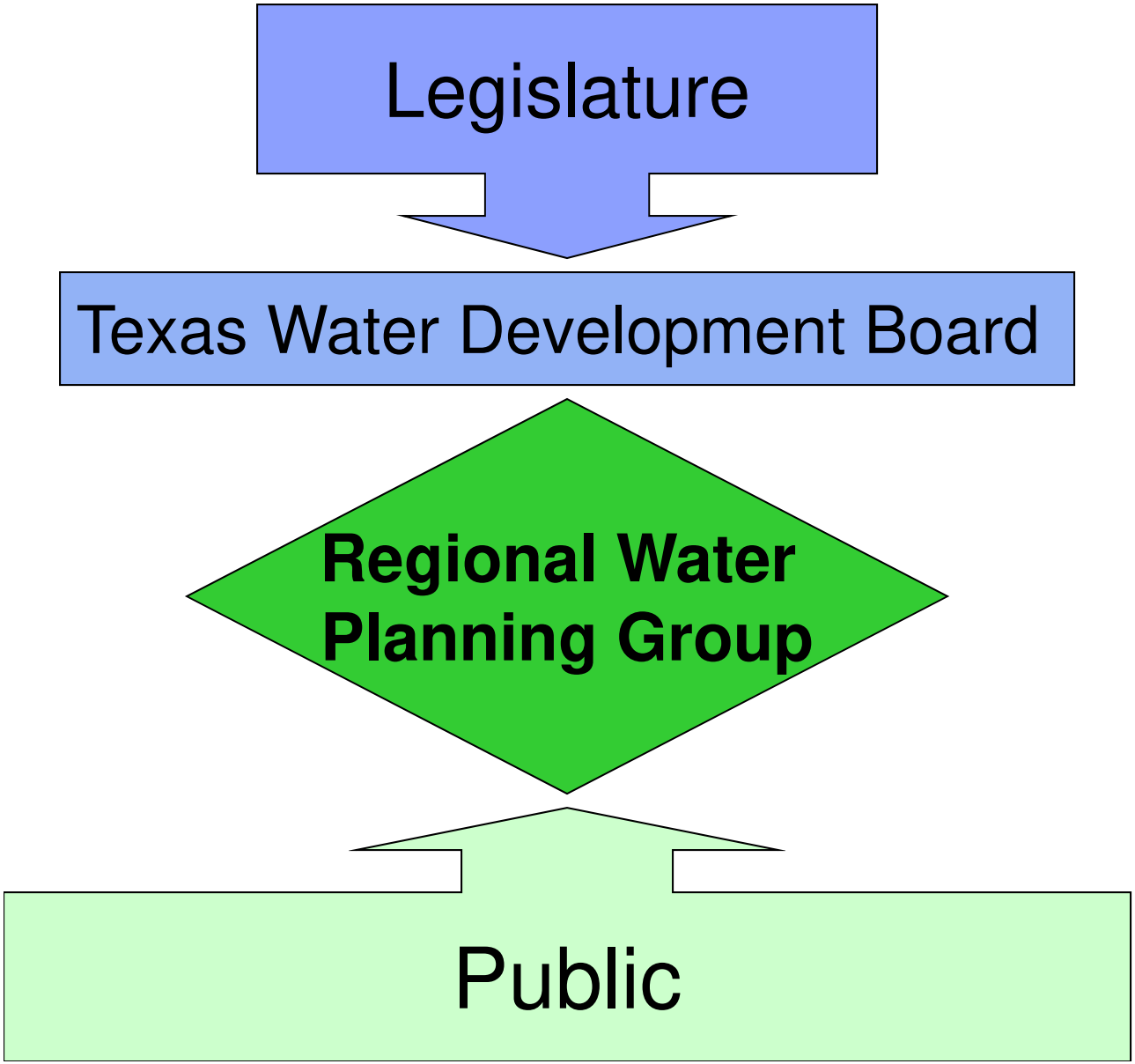
Regional Water Plans

These are water supply plans

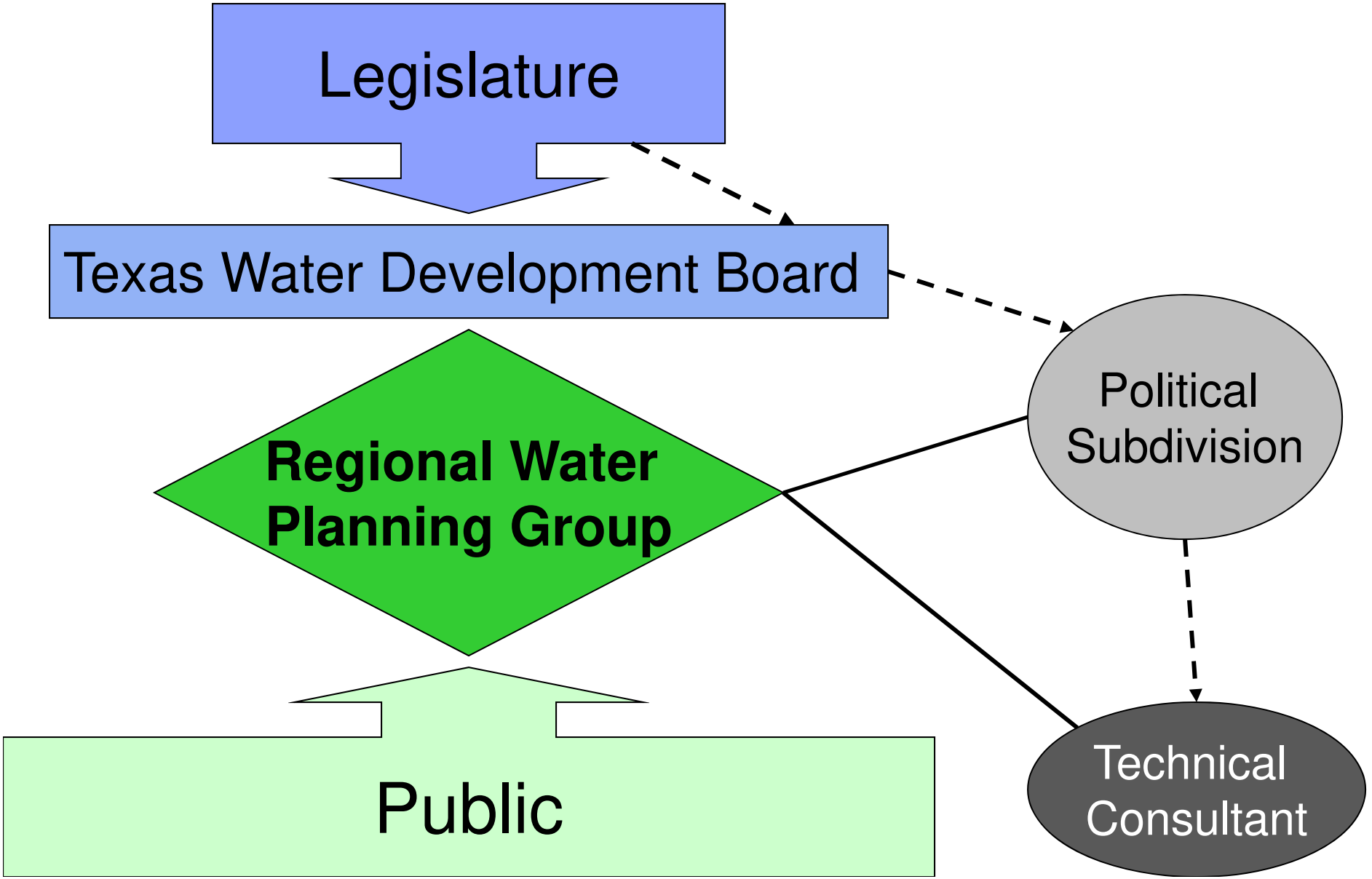
Based on ‘drought of record’

50-year horizon

Regional Planning Roles



Regional Planning Roles



Regional Water Planning Basics

- **Project population**
- **Project water demands**

Regional Water Planning Basics

- **Project population**
- **Project water demands**

Assess existing water supplies

1) "Availability" at the source, then

2) "Existing Supply" to the water user group

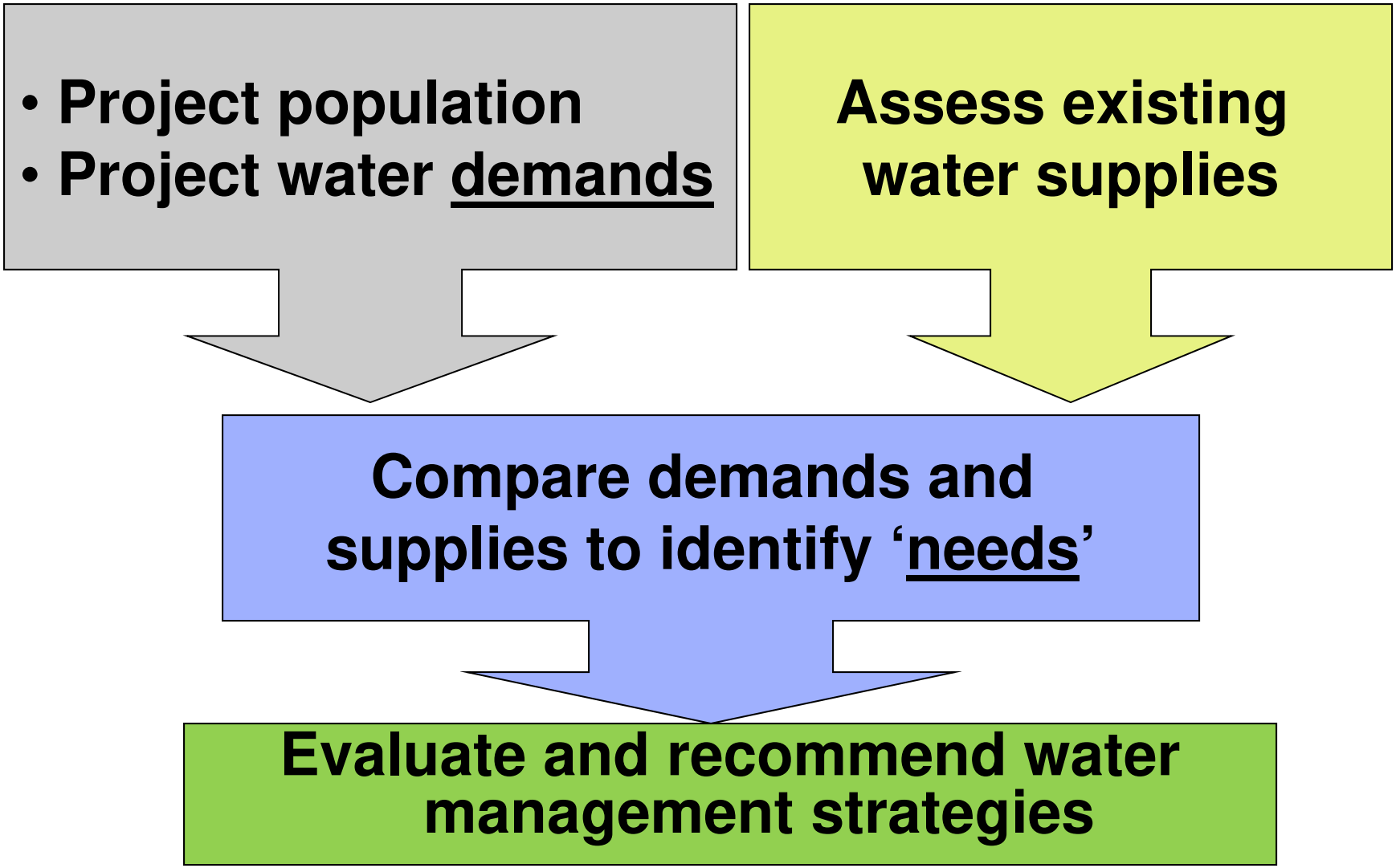
Regional Water Planning Basics

- Project population
- Project water demands

Assess existing water supplies

Compare demands and supplies to identify 'needs'

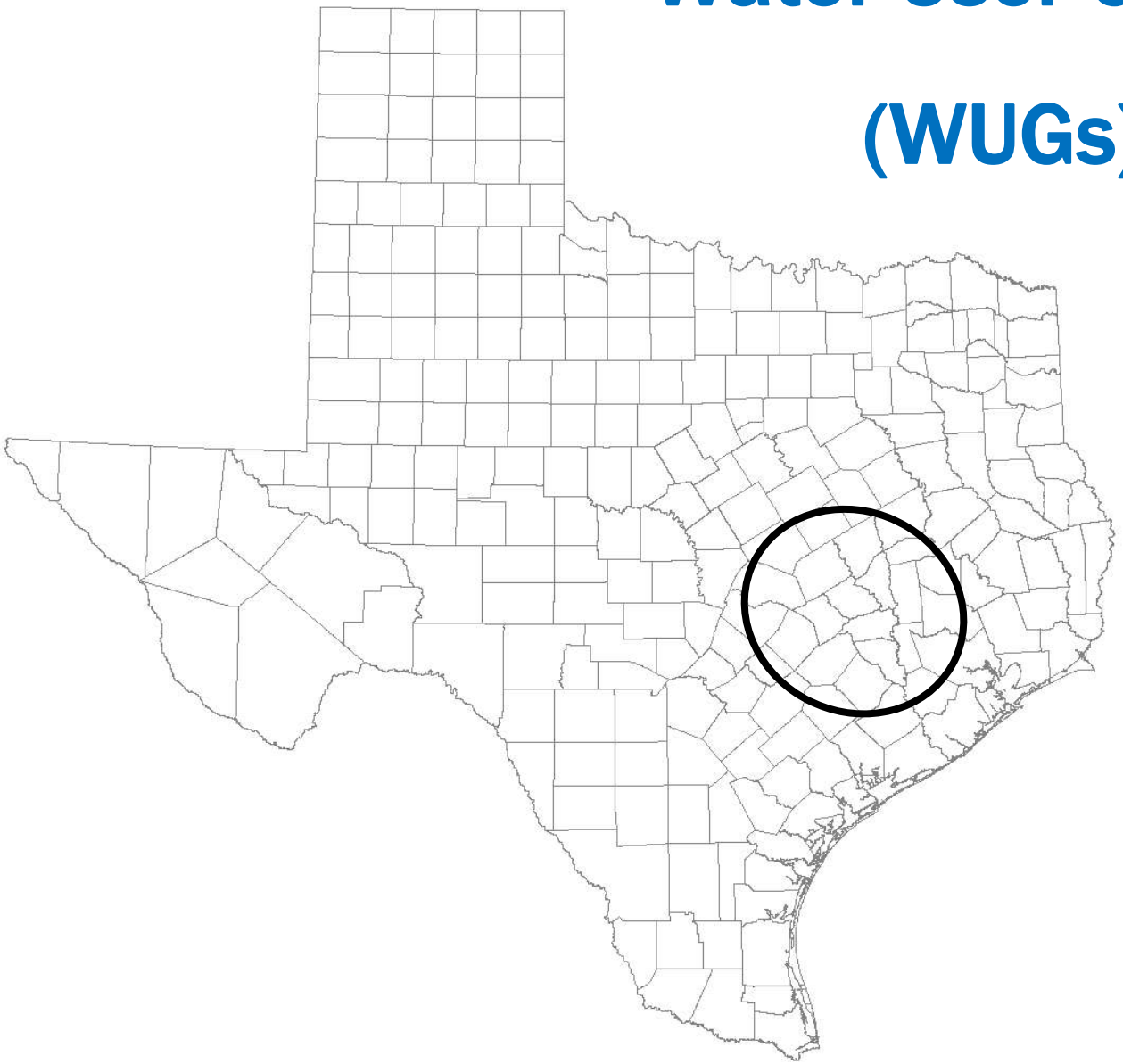
Regional Water Planning Basics



Planning Units/Terms

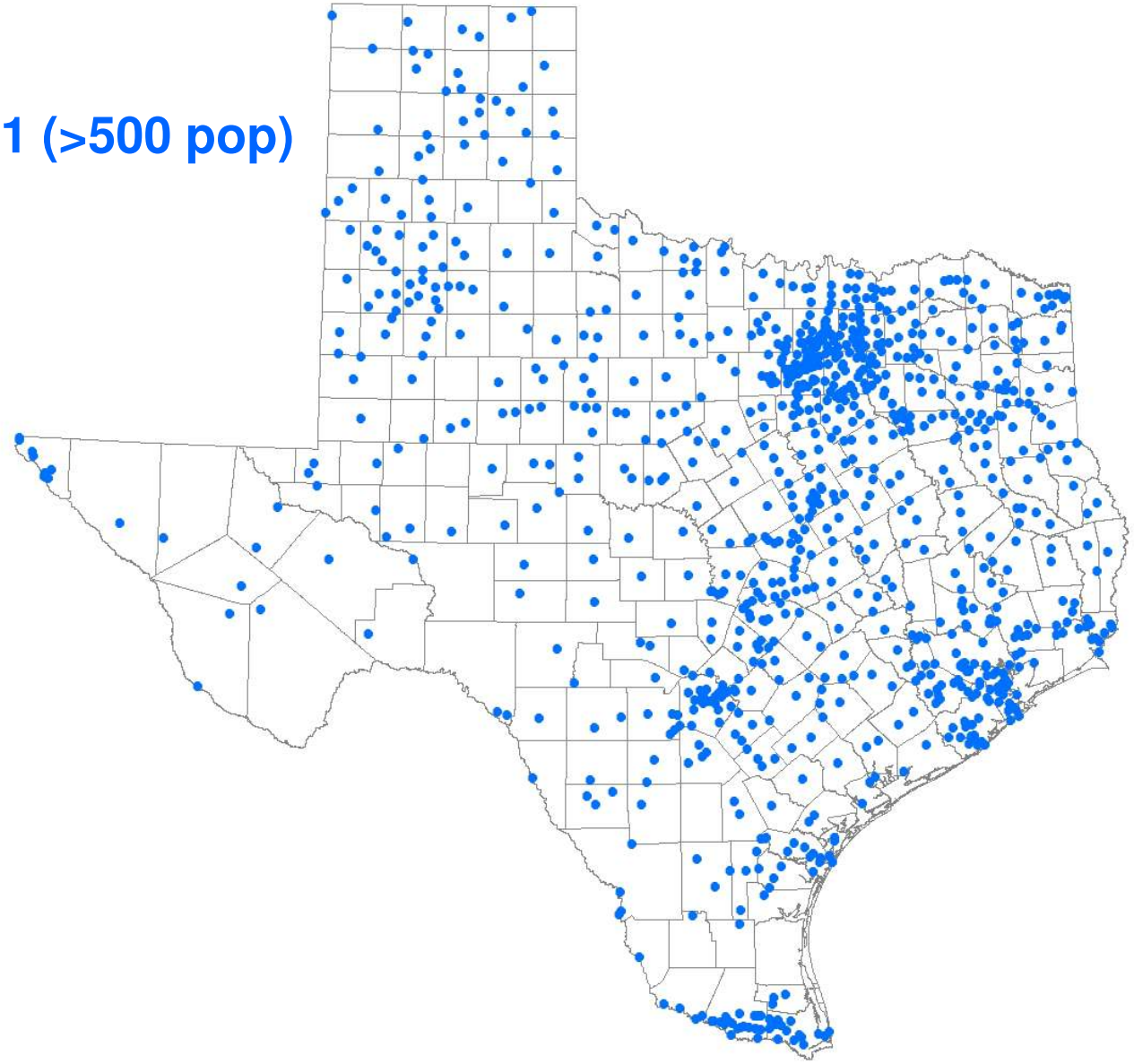
- **DOR** (drought of record)
- Timing is **decadal** (over 50 years)
- Water is presented in **acre-feet** (AF)
  (1 AF = 325,851 gallons)
- NEED is **not the same as** DEMAND
  (NEED is a potential shortage if no WMS is implemented)
- **WMS** (water management strategy)
- **WWP** (wholesale water provider)
- **WUG** (water user group)

Water User Groups (WUGs)



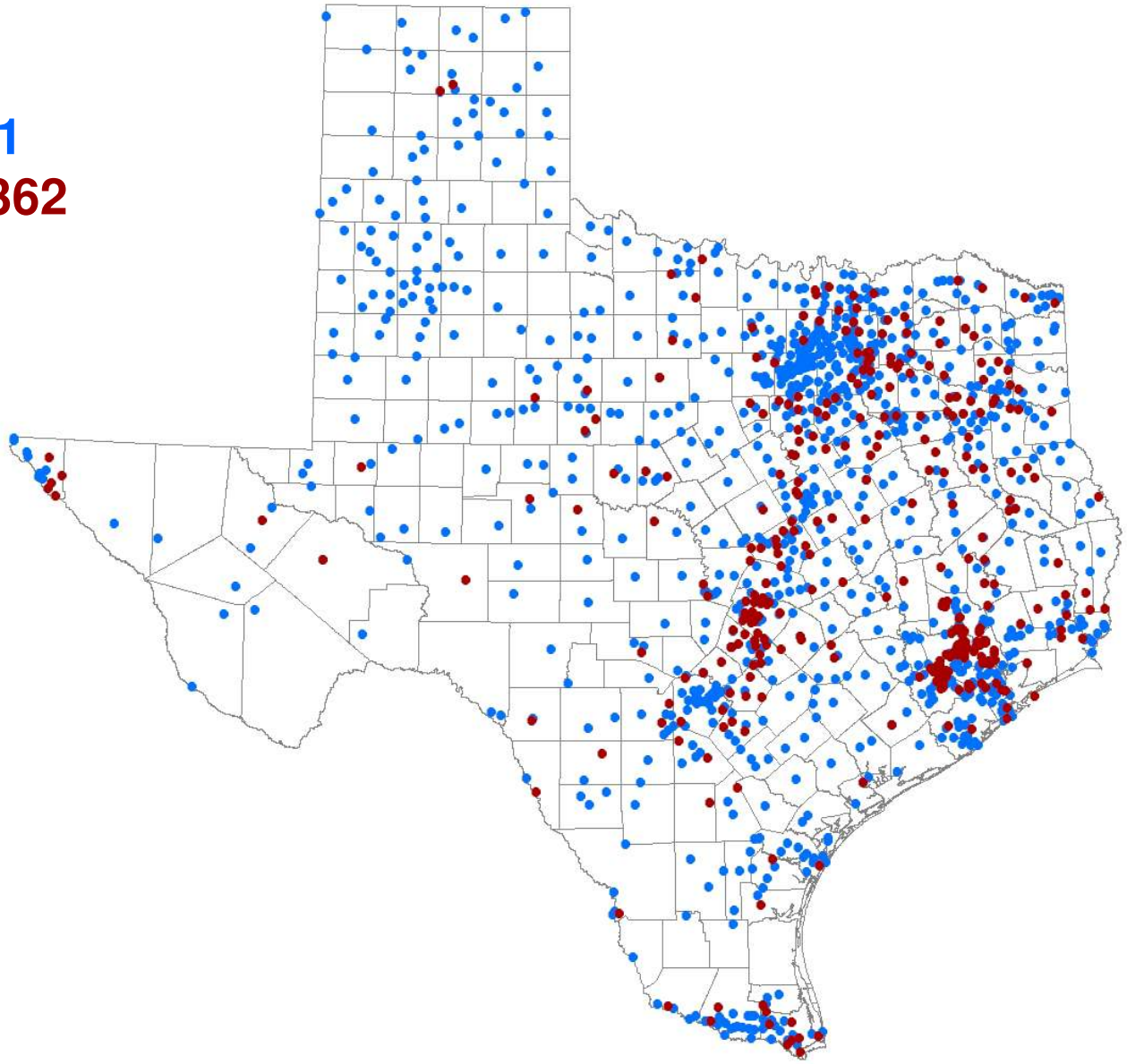
Cities

- Cities: 971 (>500 pop)



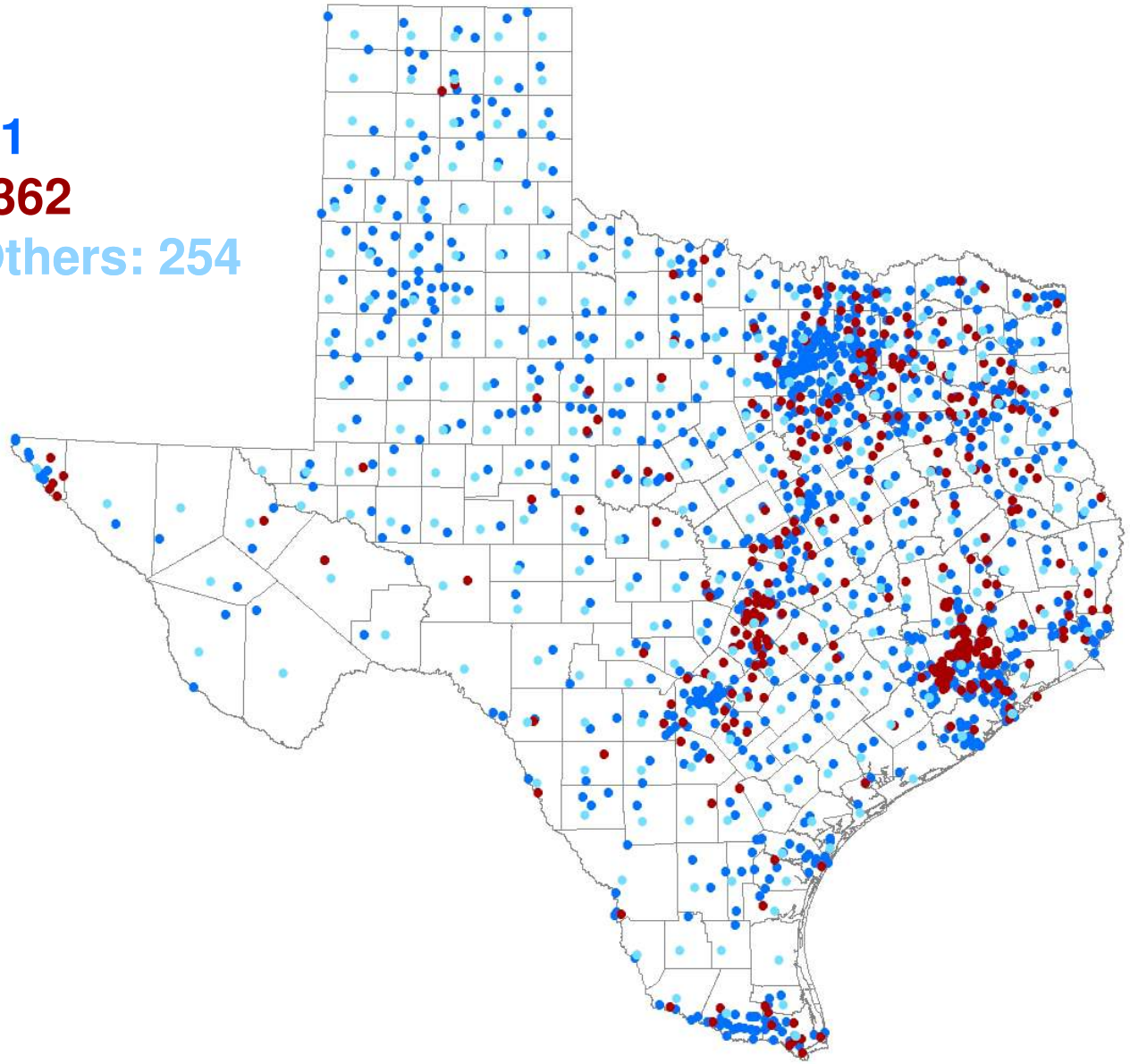
+Utilities

- Cities: 971
- Utilities: 362



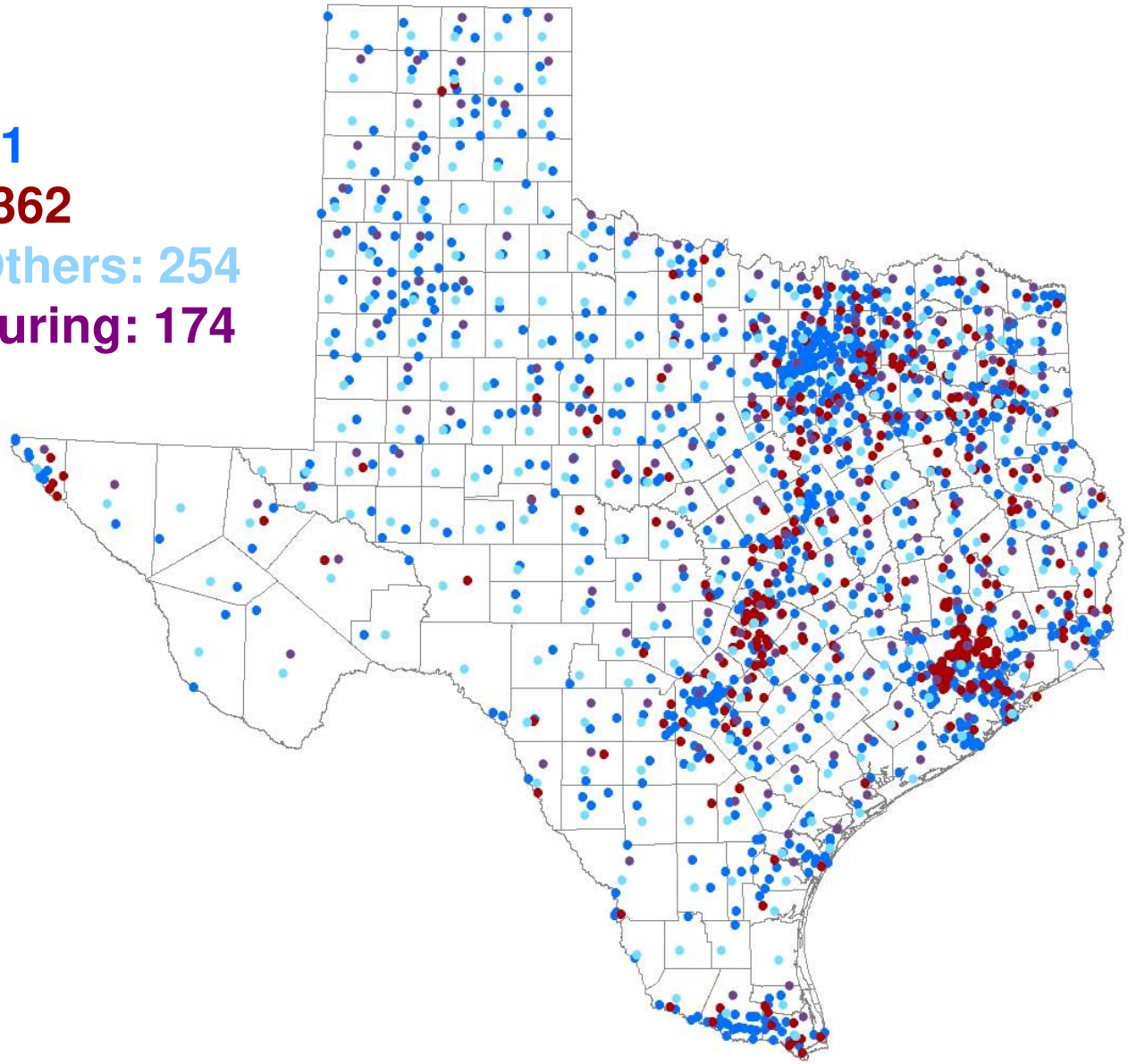
+County-Others

- Cities: 971
- Utilities: 362
- County-Others: 254



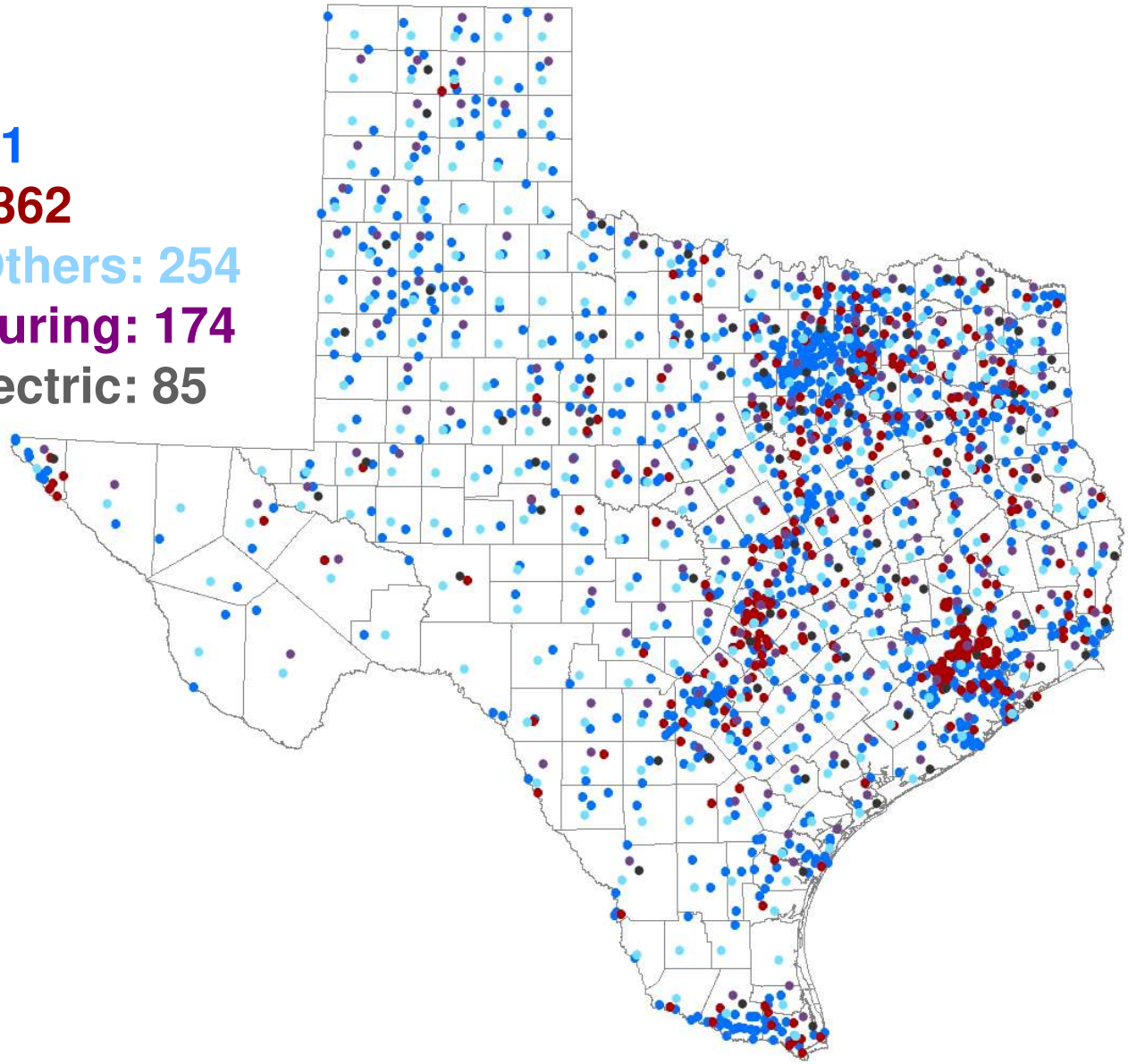
+Manufacturing

- Cities: 971
- Utilities: 362
- County-Others: 254
- Manufacturing: 174



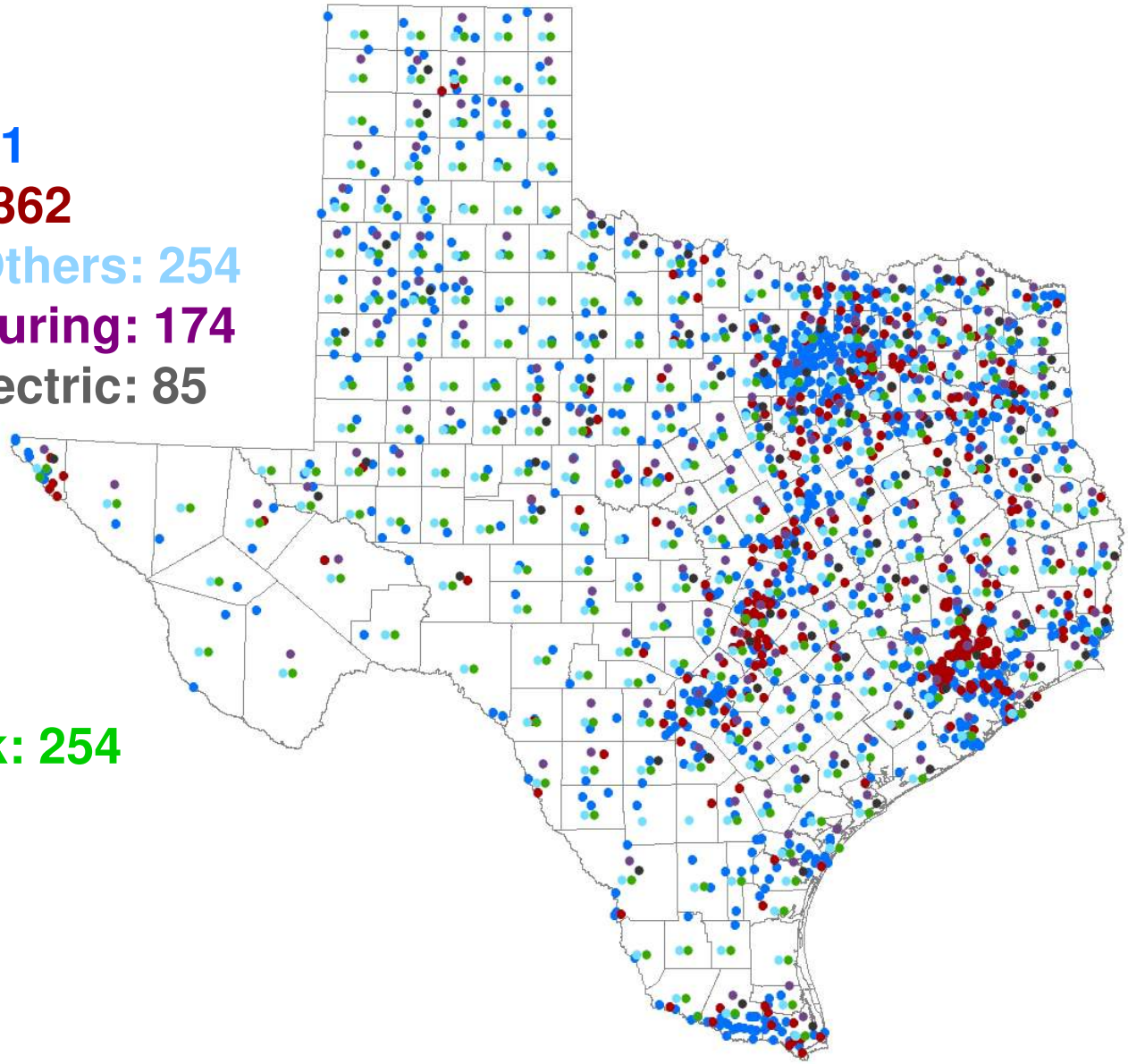
+Steam Electric

- Cities: 971
- Utilities: 362
- County-Others: 254
- Manufacturing: 174
- Steam Electric: 85



+Livestock

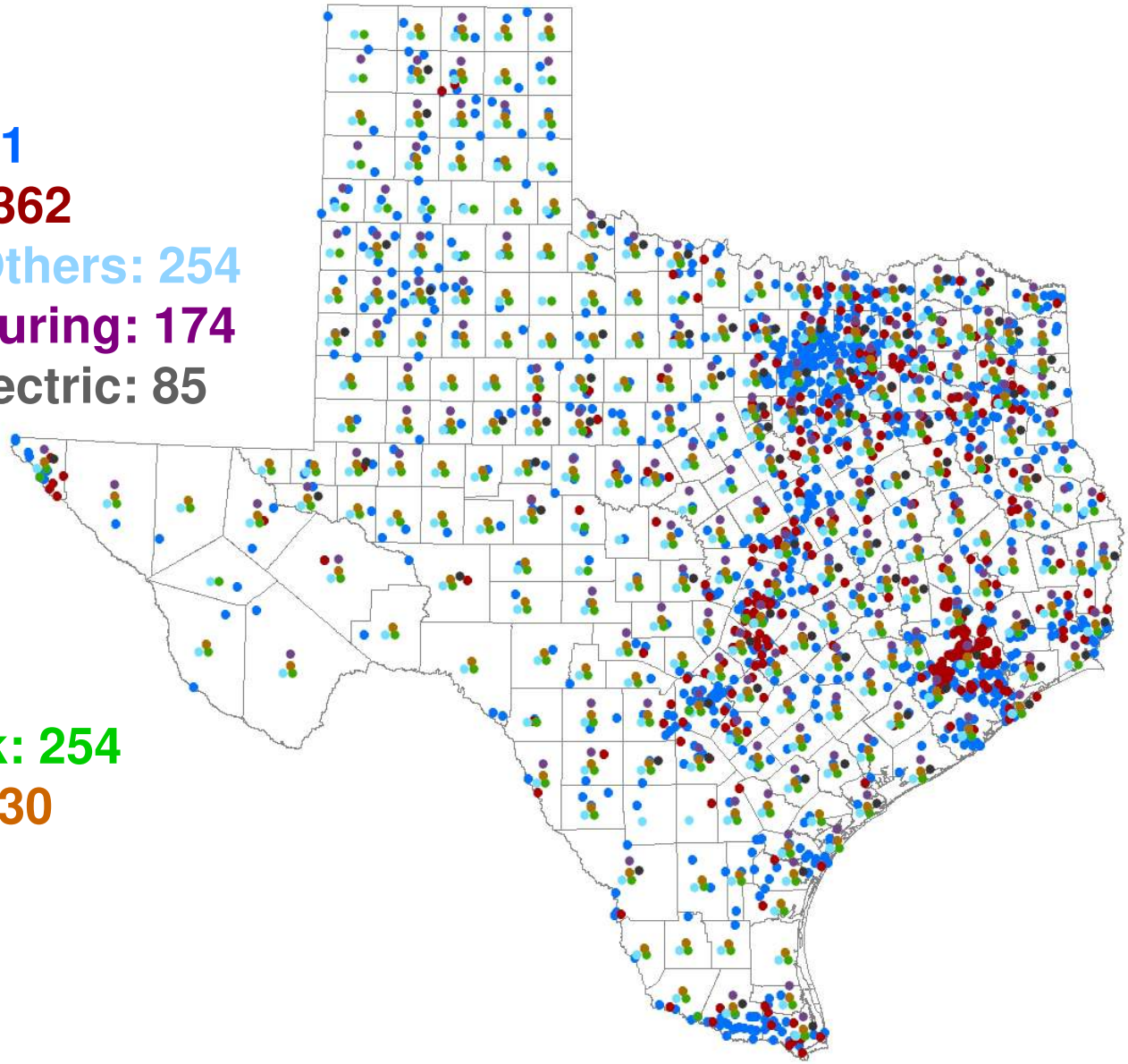
- Cities: 971
- Utilities: 362
- County-Others: 254
- Manufacturing: 174
- Steam Electric: 85



- Livestock: 254

+Mining

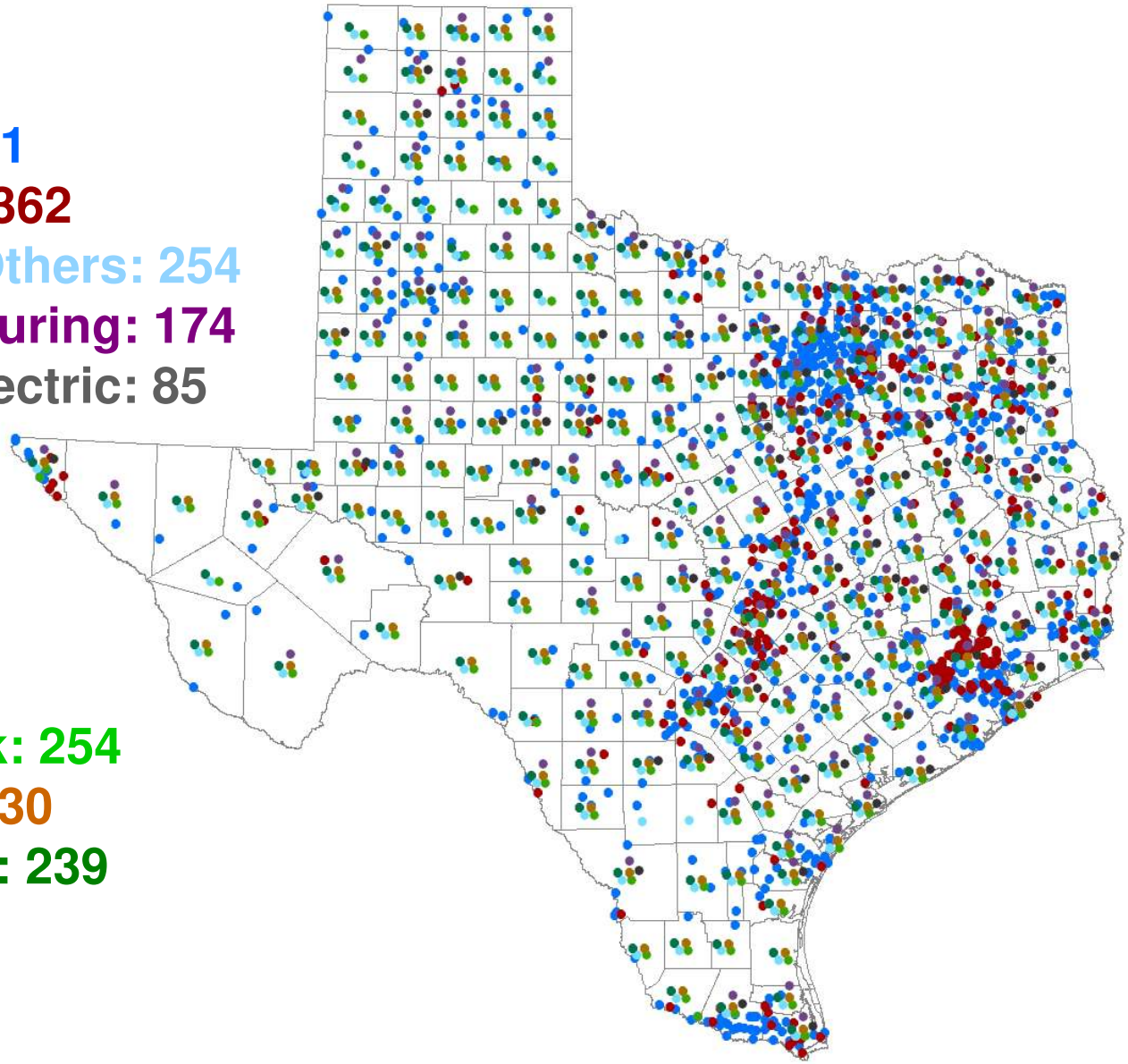
- Cities: 971
- Utilities: 362
- County-Others: 254
- Manufacturing: 174
- Steam Electric: 85



- Livestock: 254
- Mining: 230

+Irrigation

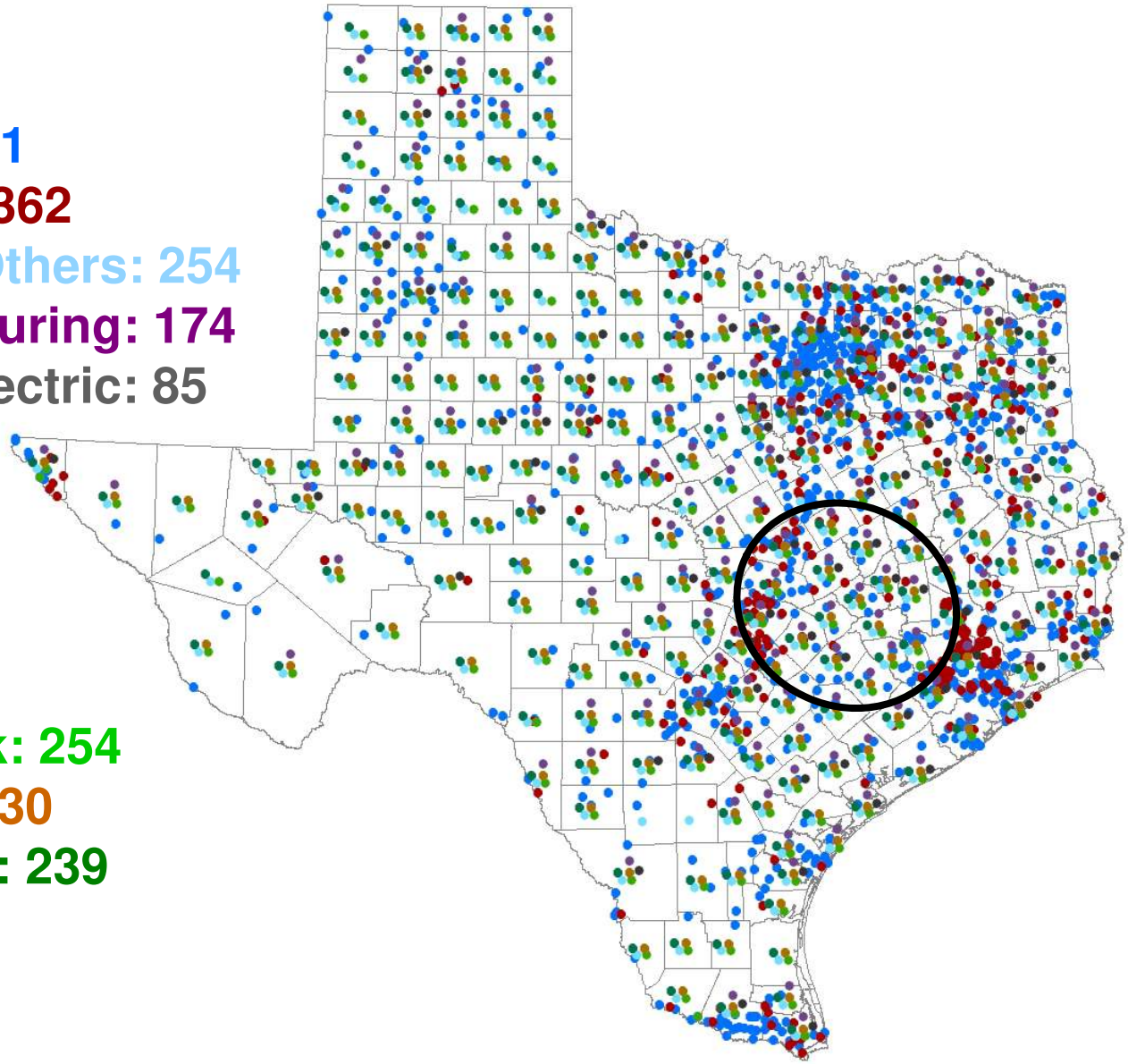
- Cities: 971
- Utilities: 362
- County-Others: 254
- Manufacturing: 174
- Steam Electric: 85



- Livestock: 254
- Mining: 230
- Irrigation: 239

Total WUGs ≈ 3,000

- Cities: 971
- Utilities: 362
- County-Others: 254
- Manufacturing: 174
- Steam Electric: 85



- Livestock: 254
- Mining: 230
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Regional Planning Tasks/Chapters

1 - Planning area description

2 - Population and water demand projections

3 - Water supply analysis

4 – Identify Water Needs

5 - Water management strategies

Regional Planning Tasks/Chapters

6 - Impacts of water management strategies and long-term protection of State's water, agricultural, and natural resources

7 – Drought response *(NEW)*

8 - Unique stream segments and reservoir sites

9 - Water infrastructure funding

10 - Adoption of plan

11 – Implementation & Comparison to 2011 *(NEW)*

Evaluation of Water Management Strategies

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.

Regional Plan Timeline

- **Technical Memorandum:** *Aug 1, 2014*
- **2011 Region Plan Prioritizations:** *Sept 1, 2014*
- **Initially prepared plans (IPP):** *May 1, 2015*
- **Comment period on IPP:** *120 days*
- **'Adopt' and submit final plans:** *Nov 2, 2015*
- **'Approval' by TWDB Board:** *start fall 2015*

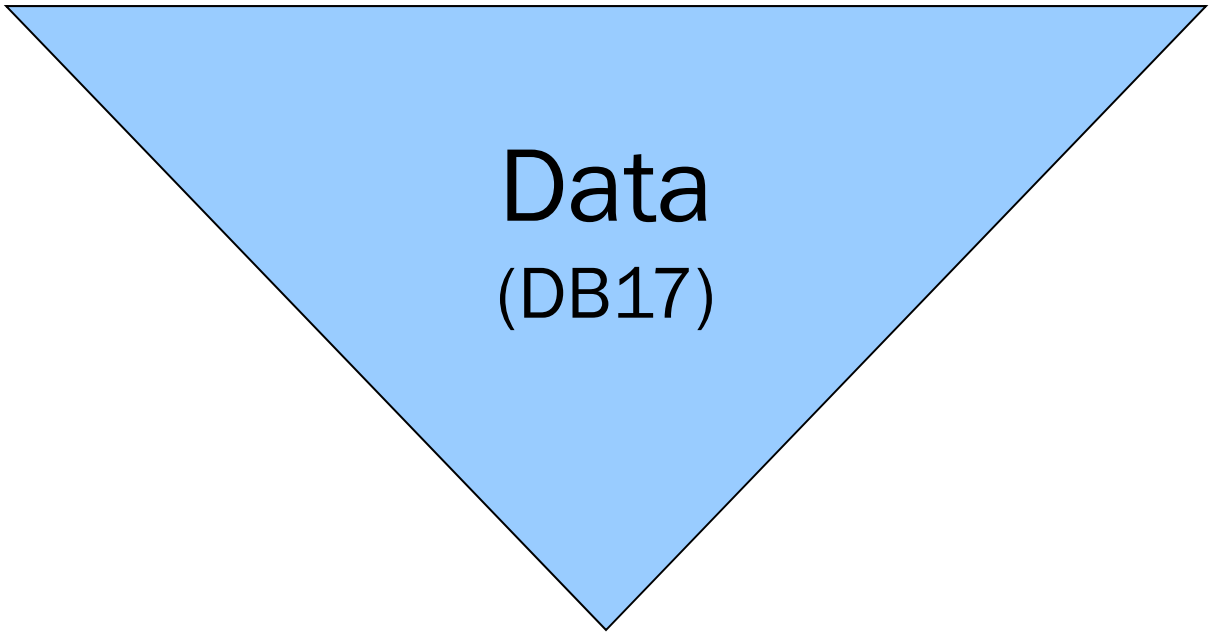
Audience

Governor & Legislators receive the State Water Plan

- *Costs and funding needs*
- *Policy recommendations*

State Water Plan

16 REGIONAL WATER PLANS



STATE WATER PLAN

http://texasstatewaterplan.org/

interactive water plan data

DEMAND = projected amount of water necessary to support anticipated water user activities.

NEED = **a potential shortage** of water if no strategy is implemented.

(coming soon:)

Water Management Strategy = project or action to increase water supply or maximize existing supply to meet **needs**

Texas Water Development Board

2012 Texas State Water Plan

First time here? | Home | About

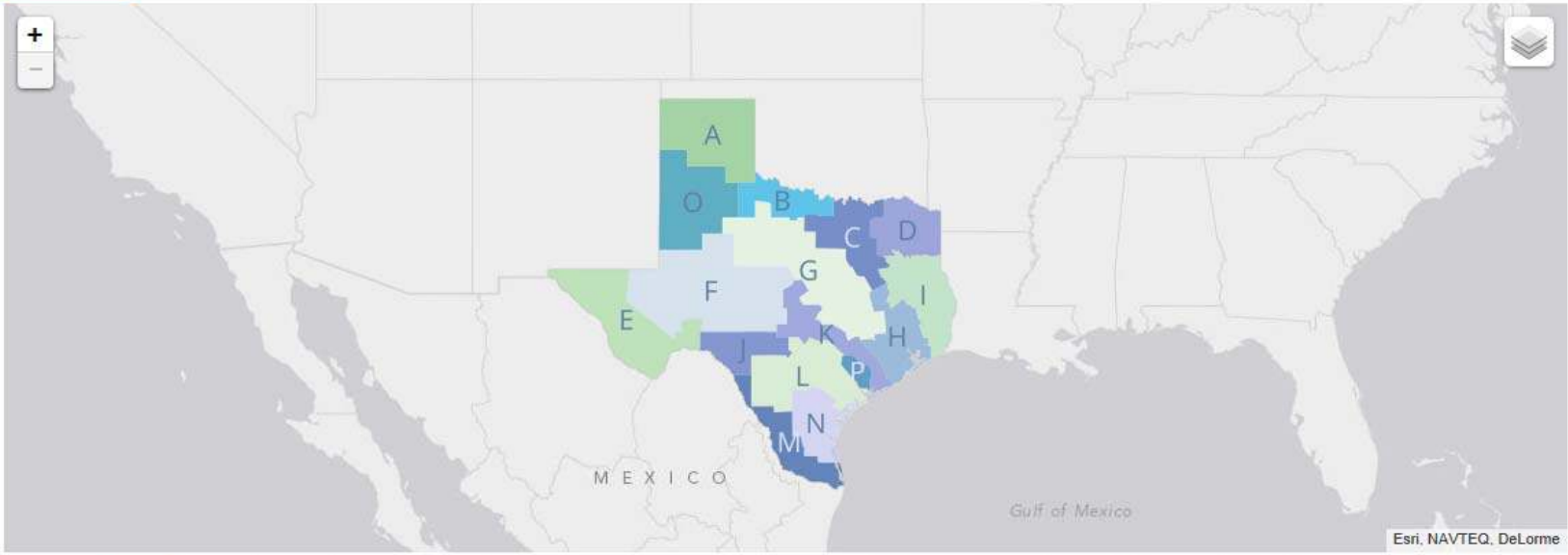
Select a type, area, or entity:

Select a Water User Type | Select a Region | Select a County | Find a

Projected water **demand** is the quantity of water projected to meet the overall necessities of a water user gr pecific future year.

Demands | Needs

Lock Map | Zoom to Texas | Hide Map



DECADE: 2010 | 2020 | 2030 | 2040 | 2050 | 2060

Some entities (e.g., county-wide entities) have overlapping locations.
Clicking on such entities will expand the group so that they may be viewed individually.

Regional Water Demand Summary - 2010

Map shows Regional Water Planning Areas that may be selected using cursor.

Table summarizes projected water demands by region and water use category in acre-feet/year (click on region for summary).

Region	Municipal	Manufacturing	Mining	Steam-Electric	Livestock	Irrigation	Total
A	77,605	43,930	14,012	25,139	37,668	1,429,990	1,628,344
B	40,964	3,547	909	13,360	12,489	99,895	171,164
C	1,546,969	72,026	41,520	40,813	19,248	40,776	1,761,352

Select a type, area, or entity:

Select a Water User Type | Select a Region | Select a County | Find an Entity

Identified water **needs** are projected water demands in excess of existing water supplies during drought of record conditions (i.e., **potential shortage** if no water management strategy is implemented).

Demands | Needs

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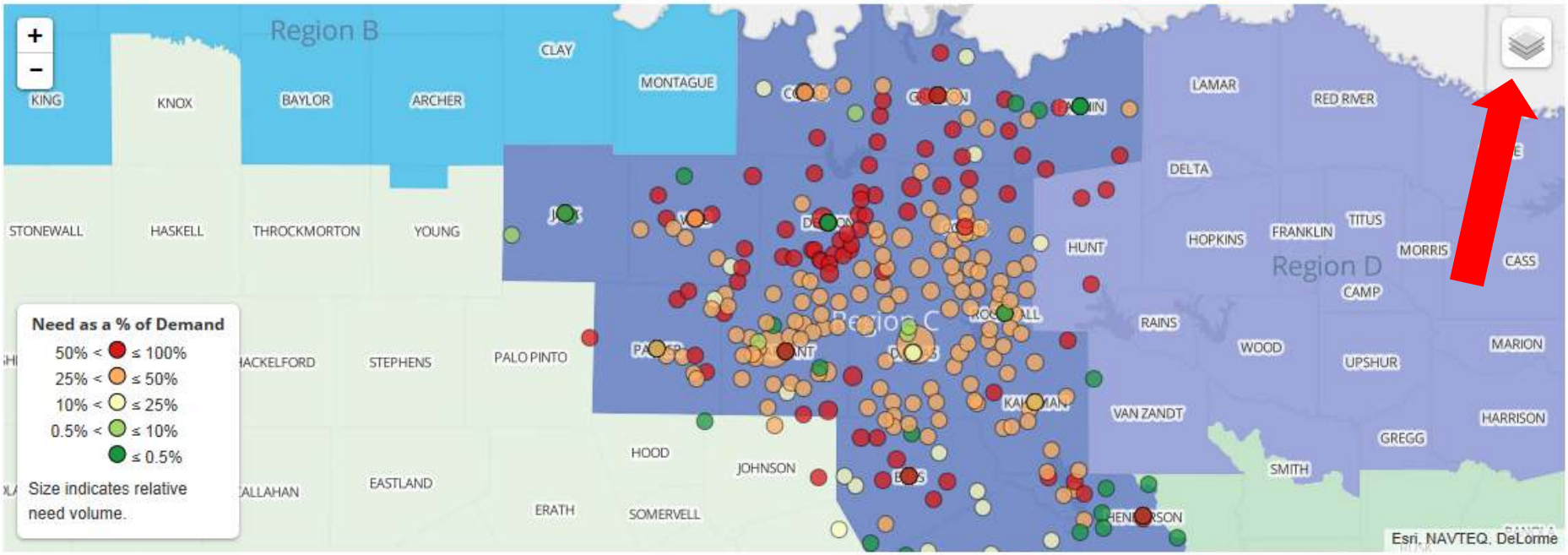

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Region C - 2060

Map displays entities and their identified water needs in **Region C** (water system service area boundaries may extend outside of region).

Table lists the share of entities' identified water needs within **Region C** in 2060

Items per page: 20 | 50 | 100 | All

Search:

Region	Name	County	Entity Type	Need (acre-feet/year) in Region	Overall Entity Need as % of Demand*
C	ABLES SPRINGS WSC	KAUFMAN	MUNICIPAL	1,828	94%
C	ADDISON	DALLAS	MUNICIPAL	5,543	45%

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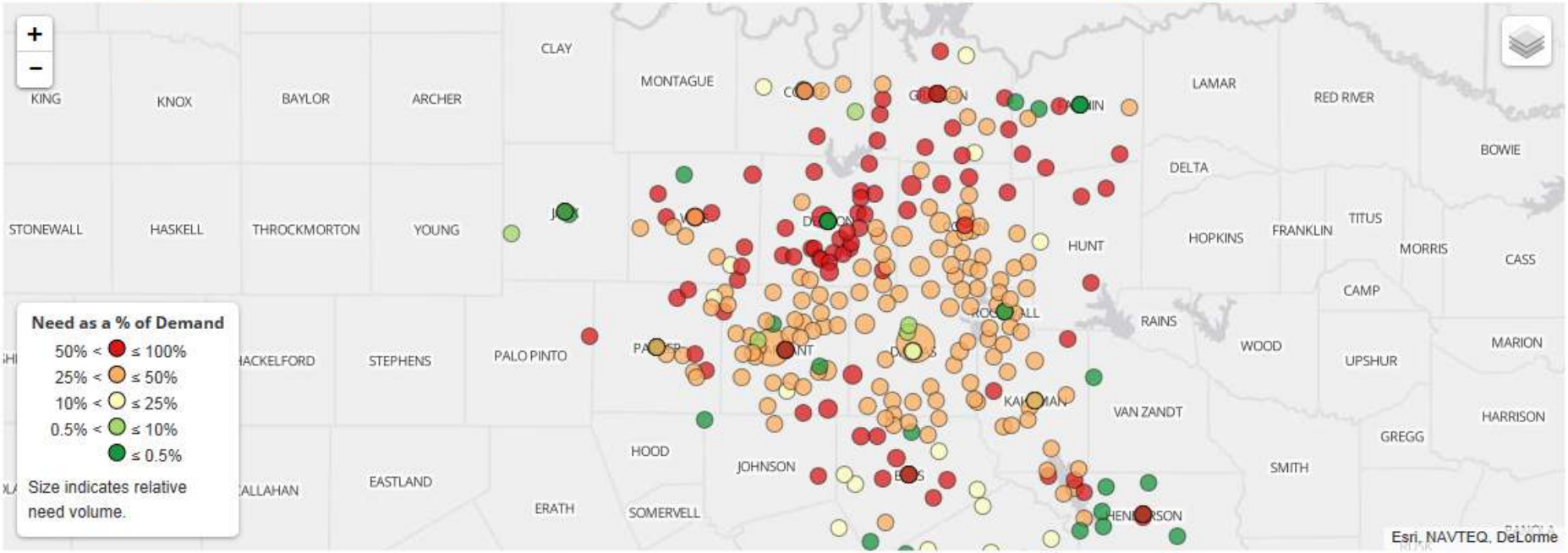

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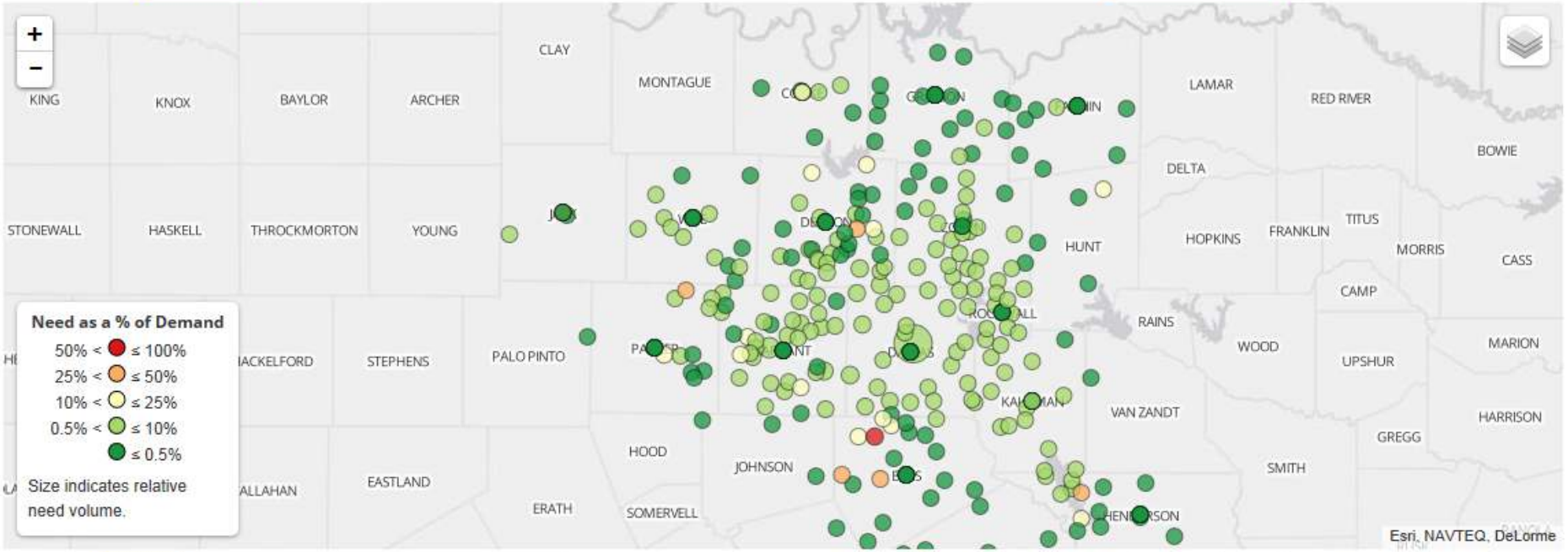

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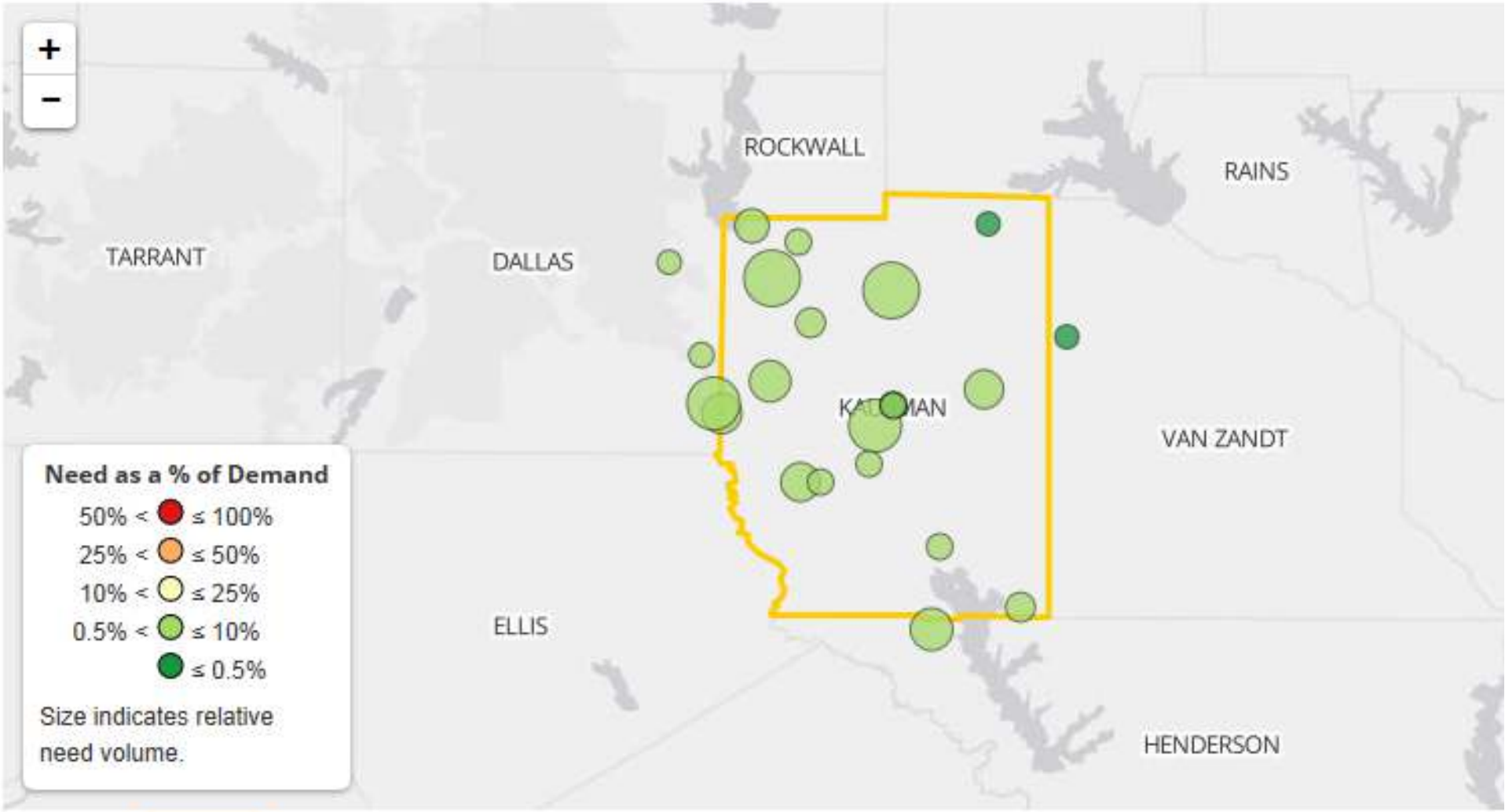
C	ABLES SPRINGS WSC	KAUFMAN	MUNICIPAL	0	0%
C	ADDISON	DALLAS	MUNICIPAL	636	8%

Demands | Needs



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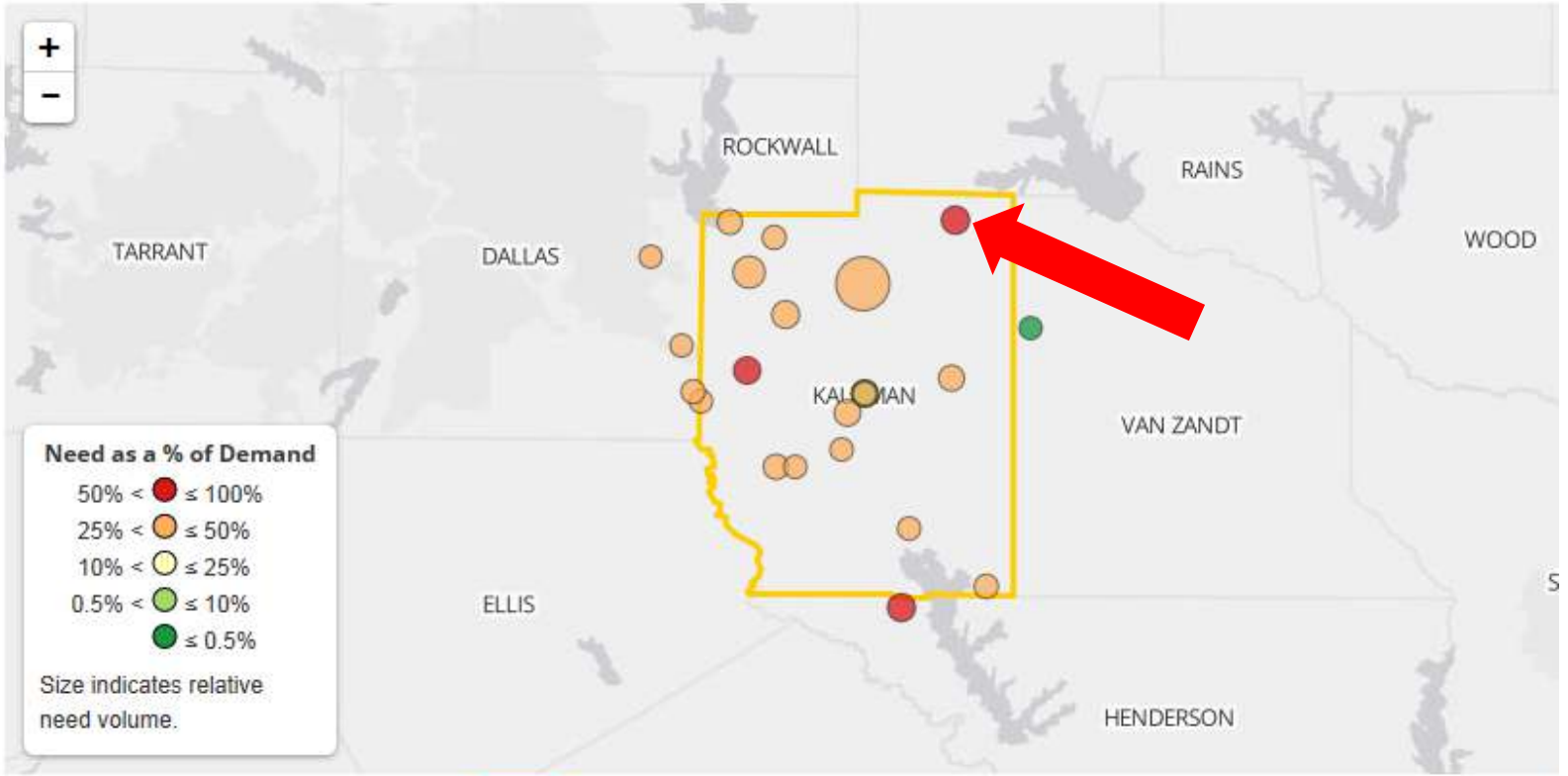
Some entities (e.g., county-
Clicking on such entities wi

Kaufman County - 2010

Demands | Needs



DECADE: 2010 | 2020 | 2030 | **2040** | 2050 | 2060

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Clicking on such entities will expand t

Kaufman County - 2040

Map displays entities and their identified water needs within **Kaufman County** (water system service area boundari

Table lists the share of entitie dentified water needs within **Kaufman County** in 2040

Items per page: 20 | 50 | 10 | All

County	Name	Entity Type	Need (acre-feet/year) in County
KAUFMAN	ABLES SPRINGS WSC	MUNICIPAL	1,195
KAUFMAN	COLLEGE MOUND WSC	MUNICIPAL	678

Demands | Needs

Lock Map | Zoom to Texas | Hide Map

DECADE: 2010 | 2020 | 2030 | 2040 | 2050 | 2060

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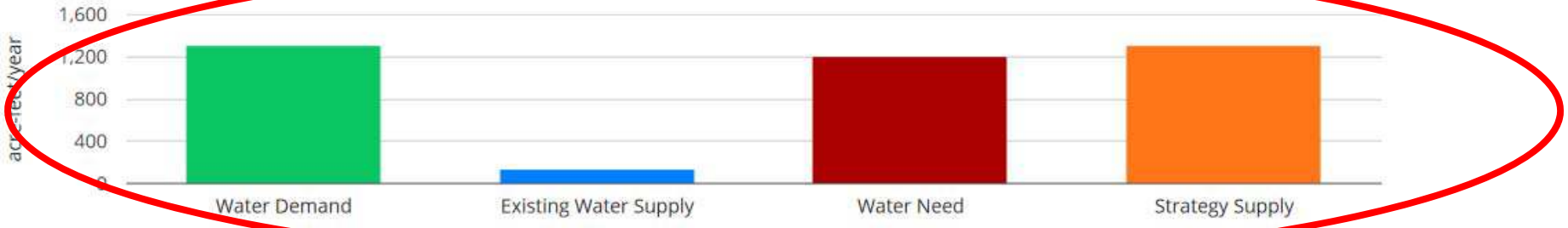
Clicking on such entities will expand the group so that they may be viewed individually.

ABLES SPRINGS WSC - 2040

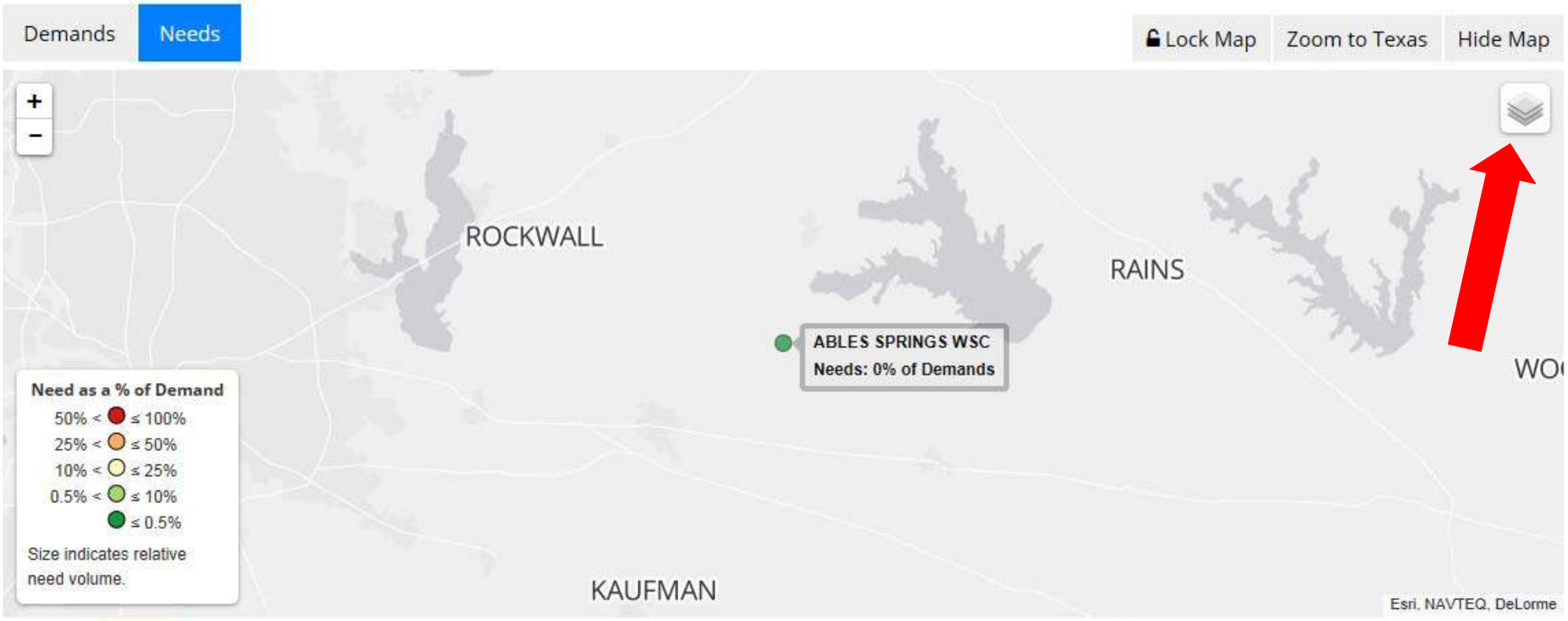
Map displays **ABLES SPRINGS WSC**.

Graph displays a summary of: Projected Water Demands, Existing Water Supplies, Identified Water Need, and Recommended Strategy Supply of **ABLES SPRINGS WSC** in 2040.

Table lists identified water needs of **ABLES SPRINGS WSC** in 2040.



NOTE: Not all water needs could be met in all decades for all water use categories due to a lack of feasible water management strategies.



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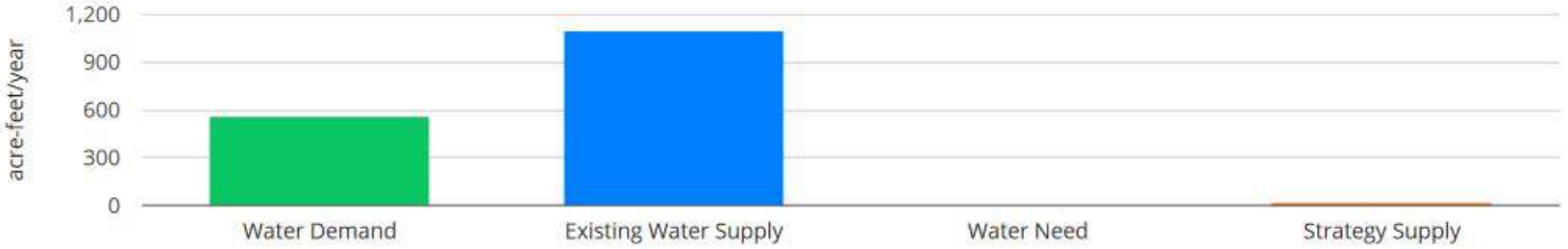

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Demands | Needs

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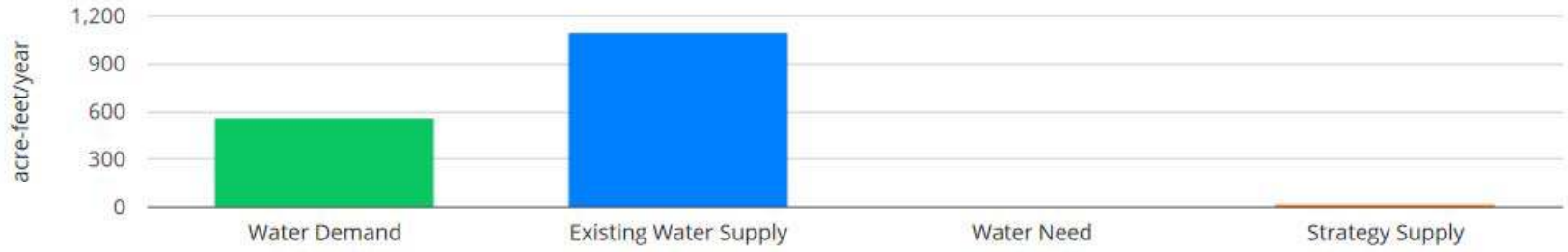

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online water plan is founded on SB1:

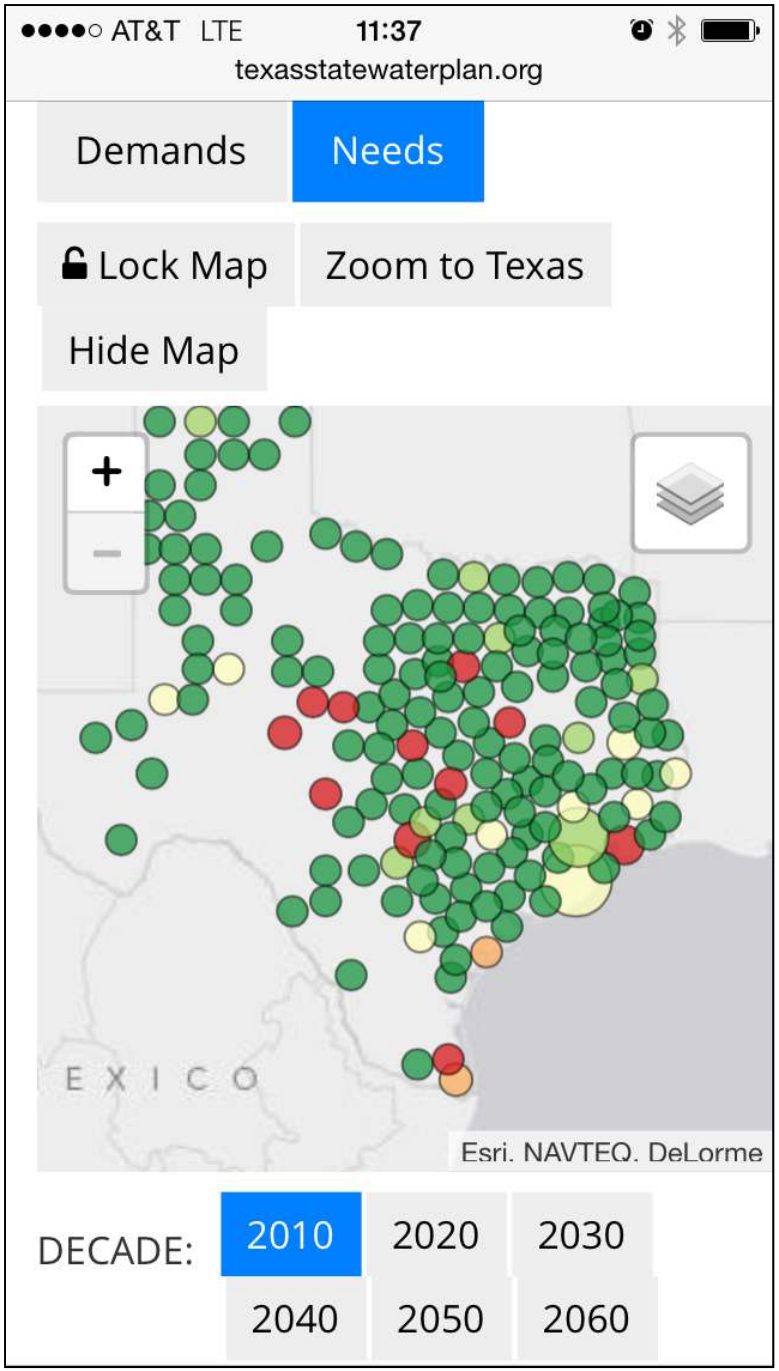
surface water availability model data

groundwater availability model data

regional water planning data

public input & transparency

- accessible on mobile devices
- data is easily downloaded



Questions?

Texas Water Development Board
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http://texasstatewaterplan.org/