RAINWATER HARVESTING

TEXAS MASTER GARDENER
TEXAS A&M AGRILIFE EXTENSION
Big Country

Why Rainwater Harvesting?

- Saves money by reducing your water bills.
- Reduces demand on the municipal water supply.
- Makes efficient use of a valuable resource.
- Reduces flooding, erosion and the contamination of surface water with sediments, fertilizers and pesticides in rainfall run-off.

Where does Texas get its water? two main sources:

*__Groundwater –__ the majority of which is pumped from the Ogallala Aquifer

*__Surface water__ from sources such as lakes, reservoirs and rivers.

Source: 2022 Texas State Water Plan
Credit: Yuriko Schumacher

LAWS/REGULATIONS REG RAINWATER

"Rule of Capture" – Landowners can capture underground water on their property.

- ***Surface Water* belongs to the State.** Throughout the years, regulations have been amended (see sources)
- **Texas has no laws that prohibit collecting rainwater.**

💧 Where does Taylor County's water come from?

- 90.3% of your water comes from surface water:
  - 87.0% comes from a lake or reservoir.
  - 3.3% comes from other surface water sources.

- 6.9% of your water comes from reuse, a process that treats water and recycles it for agricultural and irrigation purposes.

- 2.7% of your water comes from an aquifer, which is a groundwater source.

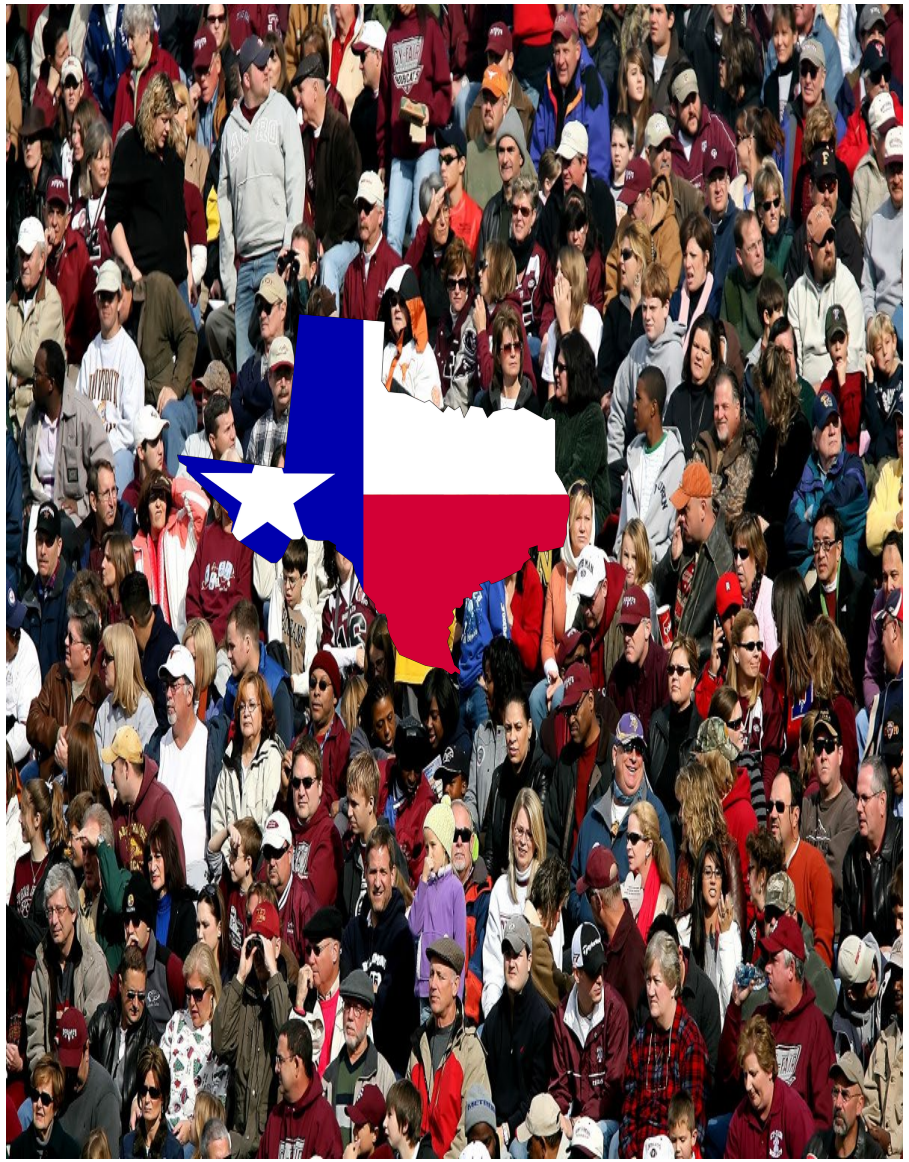
(https://www.texastribune.org/2025/03/13/texas-water-explained-supply-demand)

SITUATION IN TEXAS TODAY:

“Towns and cities could be on a path toward a severe shortage of water by 2030” (2022 water plan by the Texas Water Development Board)

- Texas water systems lose about 51 gallons of water per service connection every day.
- That's enough water to meet the total annual municipal needs of the cities of Austin, Fort Worth, El Paso, Laredo, and Lubbock combined.

- https://texaslivingwaters.org/projects/water-loss-in-texas/



- If water strategies are not implemented, the state water plan says approximately 25% of Texas' population in 2070 would have less than half the municipal water supplies they will require during a significant drought.

West Texas

Annual precipitation totals

Days	Place	Inches	Millimetres
67	Abilene	25.2	641
69	Amarillo	19.7	499
59	Del Rio	20.8	529
48	El Paso	8.8	223
69	Guadalupe Mountains Park	16.0	406
38	Lajitas, Big Bend Park	9.3	236
63	Lubbock	18.3	466
43	Odessa	12.3	312
62	San Angelo	20.9	532

Reference
NOAA National Centers for Environmental Information (NCEI).
Climate Normals.

SUPPLIES TO COLLECT RAINFALL

- Gutters and a downspout.
- Storage Tank
- Debris Screen and Lid.

YOUR PART: RAINWATER COLLECTION

How Do I Want to Use Rainwater?

10 USES FOR RAINWATER

1. Watering lawns, gardens and houseplants
2. Water for wildlife, pets or livestock
3. Washing vehicles and equipment
4. Fire protection
5. Outdoor ponds and water features
6. Bathing and laundry
7. Drinking and cooking
8. Flushing toilets
9. Rinsing vegetables
10. Composting
11. **MANY MORE USES!**

Most Common Source of Collecting Rainwater:

- Total Rainwater Collected (gallons) = **Roof Area (ft^2) x Rainfall Depth (in) x 0.623**
- To calculate the area of your roof, simply multiply the **length (in feet) by width (in feet)** for square or rectangular roofs
- Example: 1" of Rain on 1,000 sf Roof will Yield 623 Gallons

How Much Water Can I Collect?

- After you hit “Calculate”, you will be presented with the Total Annual Rainwater Collection Volume, in gallons, along with a graph showing the amount of rainwater you would collect on a monthly basis. (These monthly volumes are calculated using the monthly average rainfall amounts for your area.)
- *Select State*:

  Texas
- *Select City:*

  Abilene

Enter Your Roof Area:

- *Calculate*

Innovative Water Solutions

(https://www.watercache.com/resources/rainwater-collection-calculator#:~:text=Let's%20calculate%20it.,Name%20*)

How to Start RWH:

Determine what area you want to collect from

Do you have gutters?

Determine size barrel you need.


JUST
DO
IT.

REFERENCES

https://www.watercache.com/rainwater

https://keylifehomes.com/10-uses-for-rain-water/

https://www.twdb.texas.gov/waterplanning/swp/

https://www.texastribune.org/

https://www.twdb.texas.gov/

https://texaslivingwaters.org/projects/water-loss-in-texas/

https://www.ncei.noaa.gov/NOAA

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