

# Drought Contingency Plan Workshop

---

Kelsey Delgado, Environmental Program Manager

06 April 2023



# Purpose

---

- Based on lessons learned from Summer 2022, staff is seeking guidance from City Council in updating the Drought Contingency Plan.
- Discuss possible stage initiation triggers and restriction updates which, if implemented, could improve conservation and protect our infrastructure and resources during drought conditions.

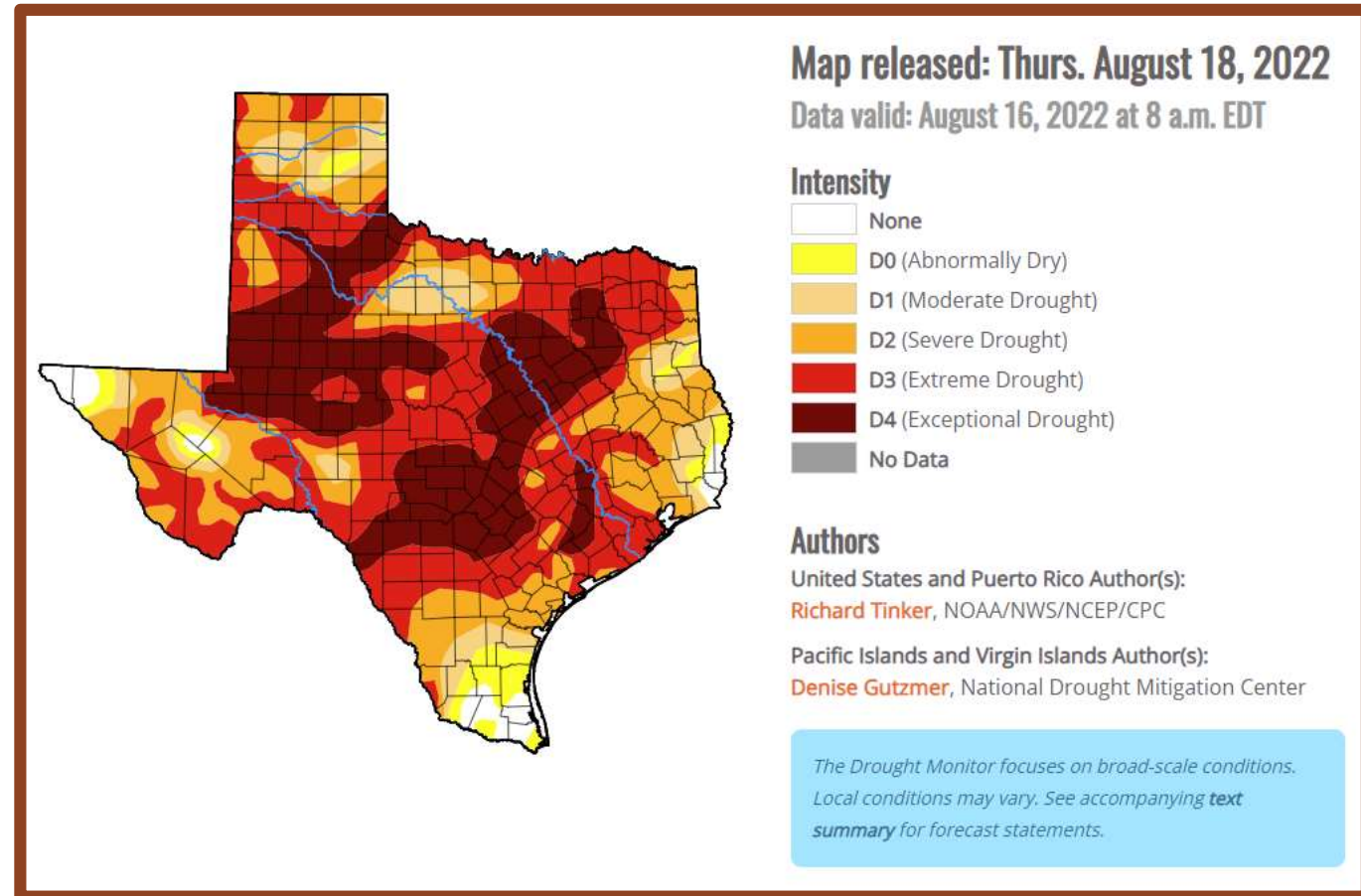
# Background

---

2022 was an exceptionally hot and dry year.

For the first time since the Drought Contingency Plan was updated in 2013, we had entered Stage 2. What we have seen so far:

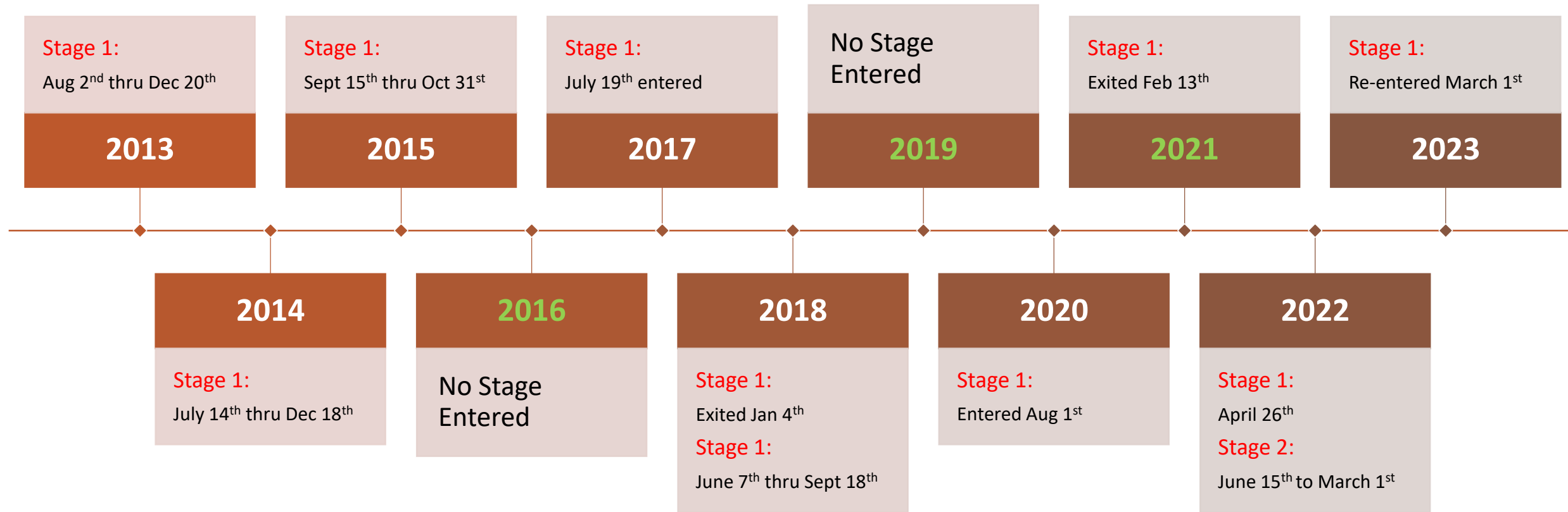
- Increased severity of drought
- Continued stress on our water utility
- The need for more water conservation practices to prevent us moving into stricter drought stages



# Lessons Learned from Summer 2022

- Faced challenges in our water utility due to high water usage during a significant drought
- Drought Stage 2 implemented early by Order of the Mayor to avoid pressure loss issues (i.e. boil water notices) and system failure
- Difficulty meeting demand surges (watering hours) heightened by inadequate storage capacity. High demand led to intermittent system shut down to prevent damage to pump station equipment.
- Well production (GPM) decreased on average by 25% (some wells >60%) as groundwater levels dropped. Increase in GBRA purchased water helped cover deficit.

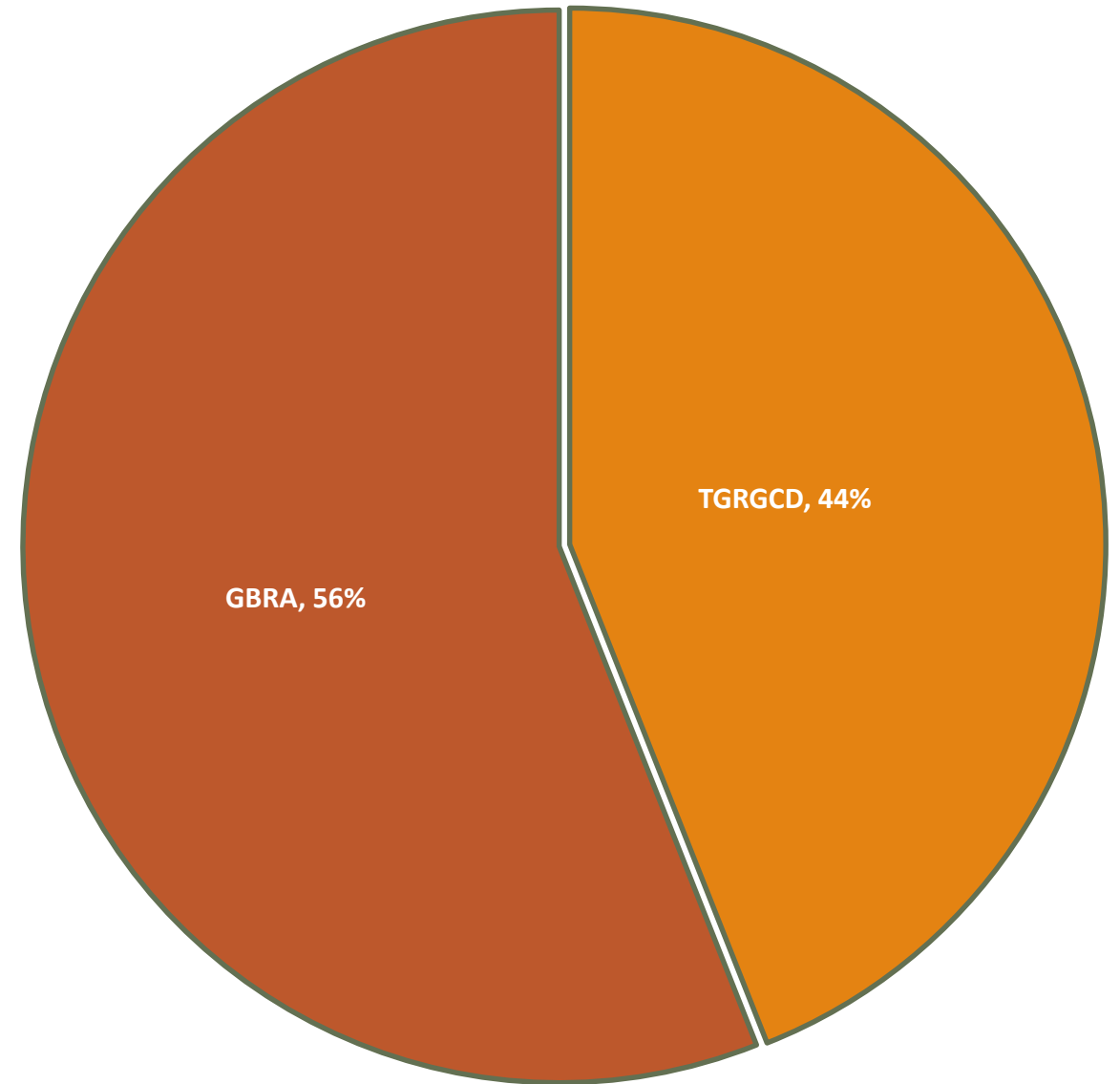
# Drought Stage History



# Water Providers for Fair Oaks Ranch

---

- Fair Oaks Water Utility – 3206 connections\*
  - 44% groundwater (TGRGCD)
  - 56% surface water (GBRA)



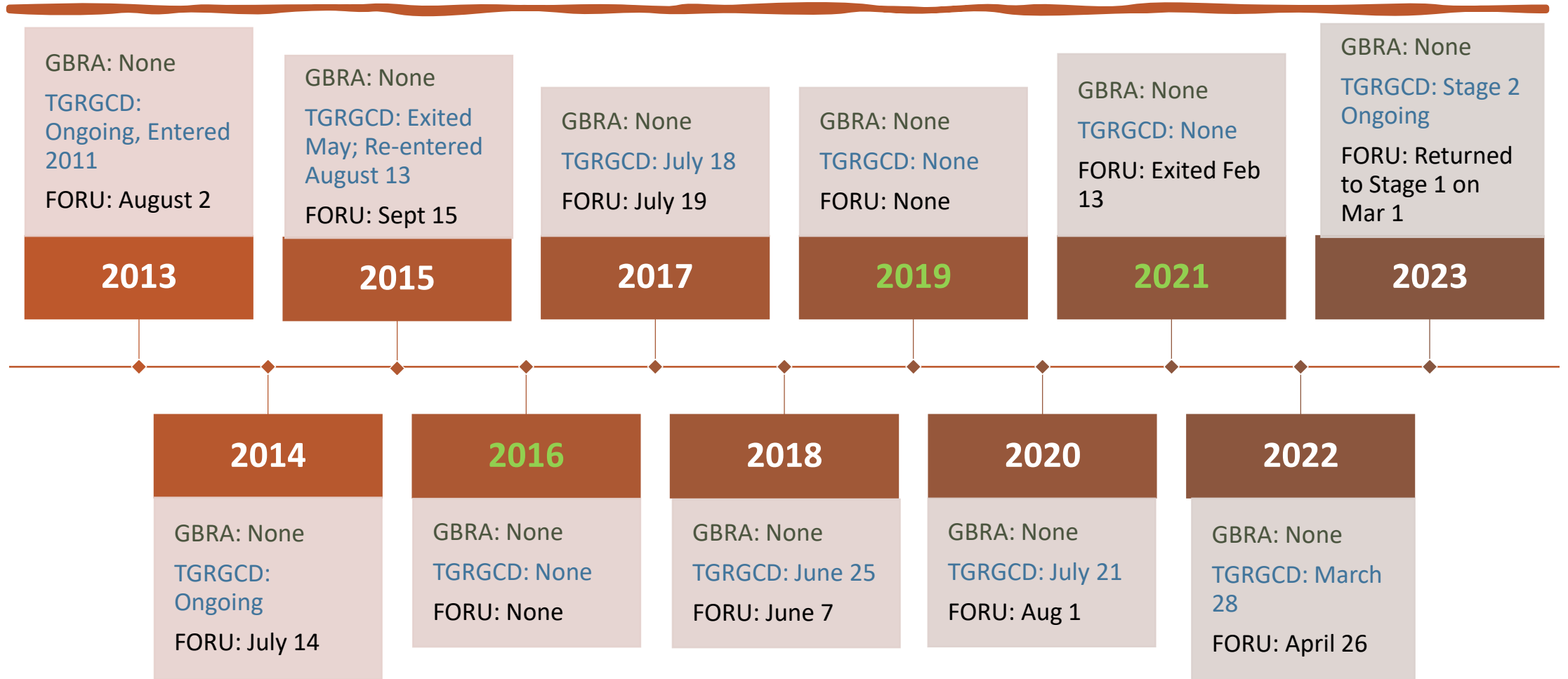
\*Estimated number of connections as of February 2023

# Suggested Trigger Updates

---

- Add Trinity Glen Rose Groundwater Conservation District (TGRGCD) as a trigger for stage initiation
  - Would need to meet 2 of 4 triggers for initiation
  - *Current Triggers (Must meet 2 of 3): Observation well level, Average consumption, GBRA Drought Initiation*
- Heighten water level average in FORU observation well.
  - Stage 1: 1,045 feet (*currently at same level*)
  - Stage 2: 1,035 feet (*currently at 1,030 feet*)
  - Stage 3: 1,020 feet (*currently at 1,015 feet*)
  - Current drought reached a low of 1024' in Oct 2022.

# Historical Drought Trigger Dates





# Suggested Restriction Updates

---

## Stage 1

- All landscape water permits are rescinded except for newly built homes\*
  - *Add exception for newly purchased lawns within the last seven (7) days prior to Stage 1 implementation.*

## Stage 2

- Watering times are shortened to once a week from 8pm to midnight (*eliminating midnight to 10am*)
- Landscape water permits for new lawn purchases are rescinded
- Swimming pools shall be covered by 25% of it's surface area.
- Golf Course watering is limited to effluent and non-potable irrigation well water, unless otherwise approved by City Manager or designee

## Stage 3

- Clarification added for the moratorium on landscaping and construction of pools restriction. This would entail a moratorium on *irrigation and pool permits*.
  - *Additionally, pools under construction during Stage 3 would need to be filled with water from a source other than FORU, unless otherwise approved by City Manager or designee.*

# Suggested Surcharge Updates

- Residential surcharges lowered and initiated in intervals of 5,000 gallons:
  - Stage 1 – 20,000 gallons (*currently at 25,000 gallons*)
  - Stage 2 – 15,000 gallons (*currently at 18,000 gallons*)
  - Stage 3 – 10,000 gallons (*currently at 18,000 gallons*)
- Add Commercial surcharges which will be initiated in intervals of 10,000 gallons:
  - Stage 1 – 50,000 gallons
  - Stage 2 – 40,000 gallons
  - Stage 3 – 30,000 gallons

# FORU Customer Water Consumption by Suggested Surcharge Initiation

---

69.85% used  
 $\leq 20,000$   
gallons

52.30% used  
 $\leq 15,000$   
gallons

33.95% used  
 $\leq 10,000$   
gallons

# 2022 Residential Water Consumption Average

---

## Summer

(June thru Sept)

**MONTHLY: 19,070**

**TOTAL: 76,282**

## Winter

(Jan, Feb & Dec)

**MONTHLY: 8,395**

**TOTAL: 25,185**

# Drought Surcharge Appeal

- A petition to remove drought surcharges from a monthly statement may be submitted in writing to the City Manager or designee for customers that experience an **extreme leak**.
- **Extreme Leak** Definition:
  - Monthly consumption exceeds the customers' two year average\* for that same month by double
  - \*If two years' worth of data is unavailable, water consumption must be more than three times the amount used from the previous month
- Process for Appeal Consideration:
  - Provide request in writing including details of water leak
  - Include Proof repair within 30 days of discovery or notification from City
  - City notify resident of determination after review and consideration

***Separate from a Leak Appeal and may be considered for any leak found on customers' property***

# Summary of Suggested Updates

- Heightening Observation Well reads to 1,045 ft, 1,035 ft, 1,020 ft
- Adding TGRGCD as a trigger for initiation
- Adding a exception for new lawn purchases within 7 days of Stage 1 initiation
- Shortening Watering times at Stage 2 from 8pm to midnight
- Shift Golf Course watering to effluent and non-potable irrigation well sources at Stage 2
- Residential Surcharge Initiations changes
  - Stage 1 – Implement at 20,000 gallons
  - Stage 2 – Implement at 15,000 gallons
  - Stage 3 – Implement at 10,000 gallons
- Commercial Surcharge Initiation
  - Stage 1 – Implement at 50,000 gallons
  - Stage 2 – Implement at 40,000 gallons
  - Stage 3 – Implement at 30,000 gallons



Questions?

---