

Drought Contingency and Conservation Initiatives

for Corpus Christi City Council

Michael Murphy, COO

January 31, 2023



Overview

- Water Sources and Recharge Zones.
- Drought Contingency Plan.
 - Revising the DCP.
 - Proposed Changes.
 - Staff Recommendation.
- Water Conservation 365 Program.
 - Overview.
 - Implementation.
 - Resources and Outreach.

Water Restrictions and Lake Levels

DROUGHT CONTINGENCY PLAN

Combined storage levels of
Lake Corpus Christi and
Choke Canyon Reservoir

43.1%

As of 01-18-2023

50% Water Restrictions lifted above 50%

40% Stage 1- Mild Water Shortage Watch

30% Stage 2- Moderate Water Shortage Watch

20% Stage 3- Critical Water Shortage

Historical combined storage
levels of Lake Corpus
Christi and Choke Canyon
Reservoir

44.4%

ONE MONTH AGO

52.6%

ONE YEAR AGO

CORPUS CHRISTI WATER

WATER DATA DASHBOARD

WATER RESTRICTIONS FAQs

HOW CAN I SAVE WATER?

CCW Corpus
Christi Water™
Serving the Coastal Bend

The City of Corpus Christi is under Stage 1 Water Restrictions.

Water Sources

- CCW produced an average of 80 MGD last fiscal year.
- Surface water resources:
 - Lake Texana (Mary Rhodes Pipeline).
 - Colorado River (Mary Rhodes Pipeline Phase II).
 - Nueces River.
 - Choke Canyon Reservoir (CCR).
 - Lake Corpus Christi (LCC).

Nueces River Choke Canyon Reservoir



Full Capacity:
662,821 acre-ft



Colorado River Mary Rhodes II



Run of the river
Water Rights:
35,000 acre-ft



Nueces River Lake Corpus Christi



Full Capacity:
256,339 acre-ft



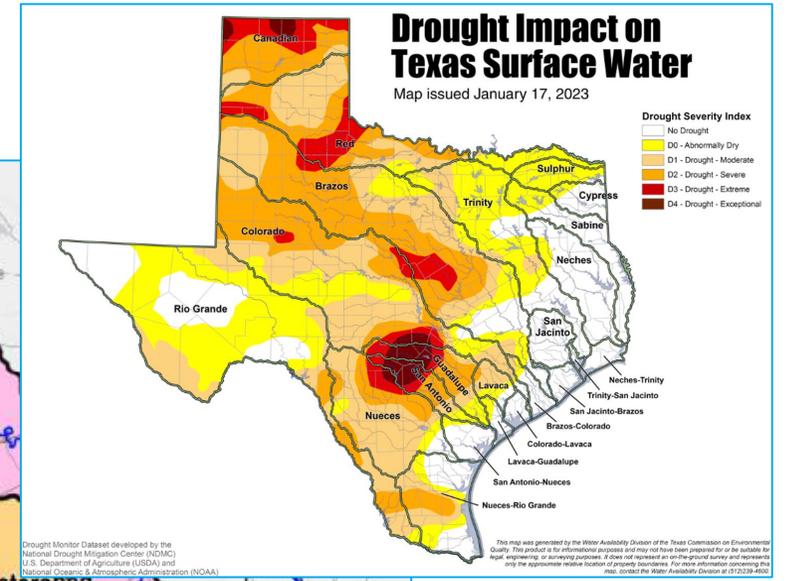
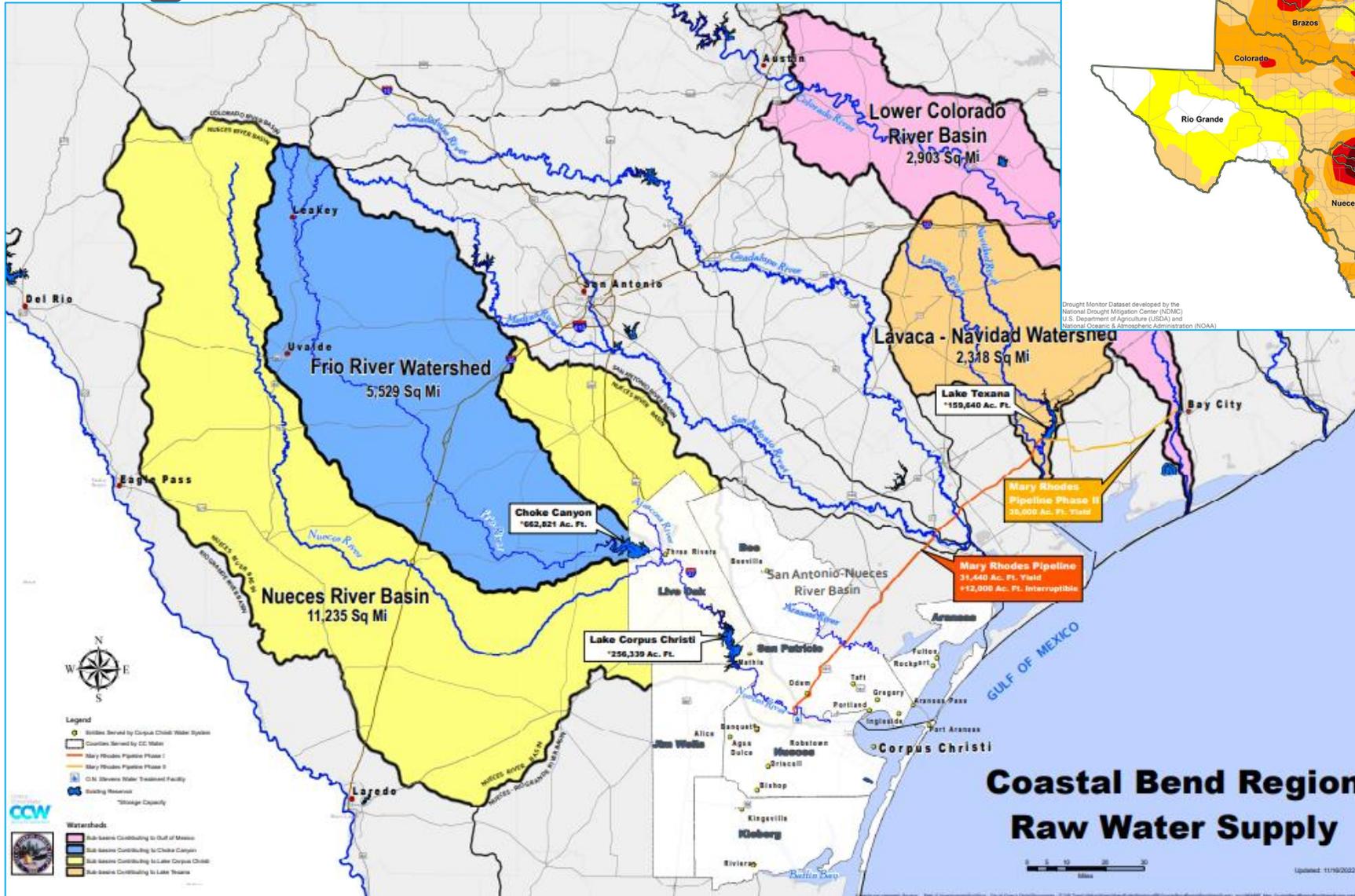
Lake Texana Mary Rhodes



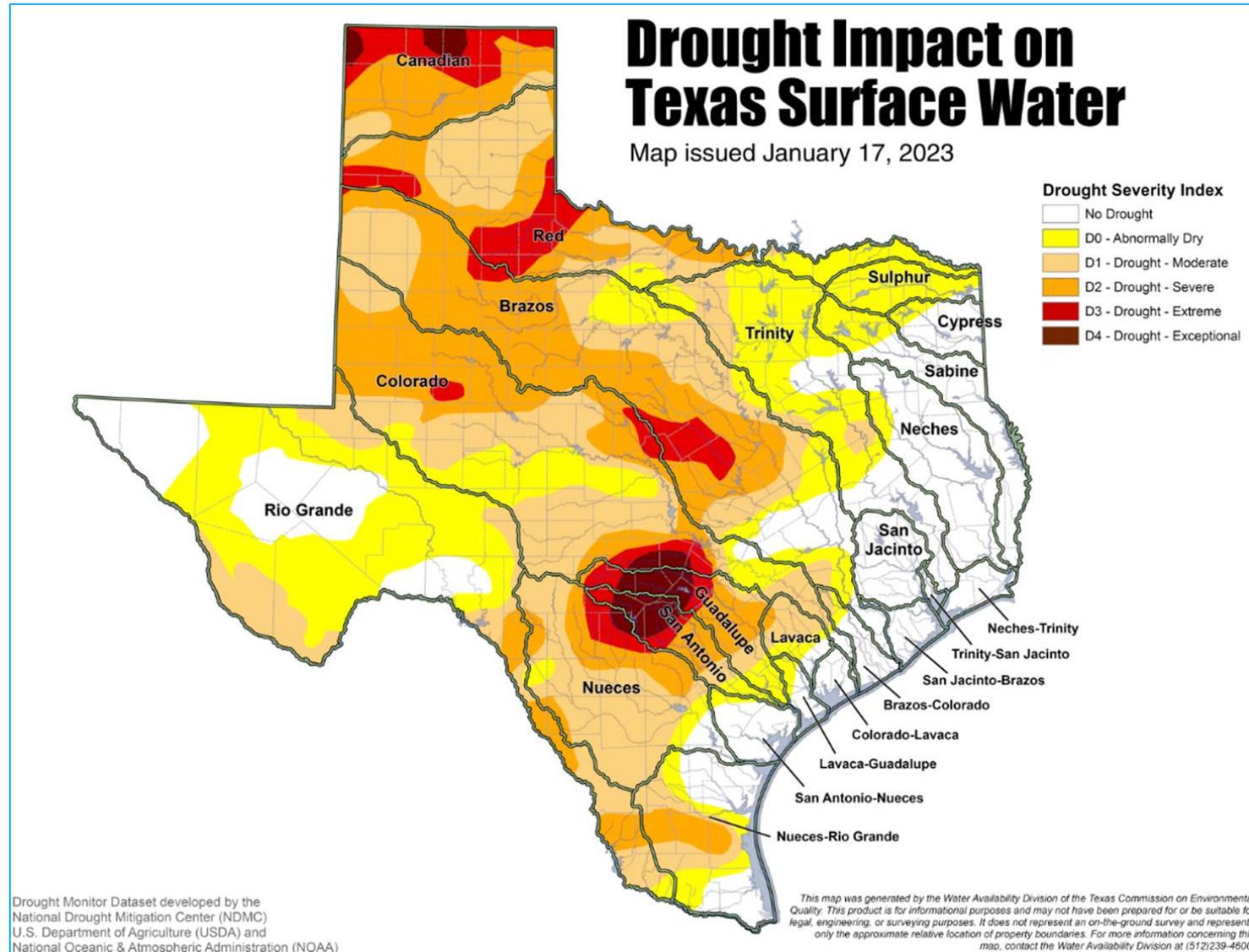
Full Capacity:
158,975 acre-ft
Contract Amount: 31,440 acre-ft



Recharge Zones



Ongoing Drought in Texas



Drought Contingency Plan (DCP)

- The city of Corpus Christi was the first in Texas to create a DCP in 1986. In 2018, City Council updated the document.
- *Short-term* water security planning document used during times of drought and water shortages.
- Triggered when combined reservoir capacities fall below certain levels or in the event of an emergency, ensuring residents have enough water to make it through a drought.
- Water restrictions are part of the DCP.
- Updated every five years or as needed.

Revising the DCP



- Living document designed to change with our resources, supply and demand.
- Includes lessons learned from previous droughts as well as the current and ongoing drought.
- Designed to work with the Water Conservation Plan and Water Conservation 365 Program.

**DROUGHT
CONTINGENCY
PLAN**
Revised 2023



Corpus
Christi Water
CCW
Serving the Coastal Bend



Proposed Changes

- Adding a Voluntary Stage: Water Shortage Watch.
 - Triggered when the combined capacity of LCC and CCR falls below 50% or when Lake Texana falls below 40%.
 - Allows for heightened communication around conservation.
- Surcharges.
 - Introducing surcharges for large water users.
 - Removing surcharges for residential customers.
- Administrative /Clean-Up Changes.

Proposed Changes

- Stage 1.
 - Watering or irrigating of landscaped areas by any means will be allowed outside of the hours of 10:00 a.m. and 6:00 p.m. *only*.
- Stage 2.
 - Currently triggered when the combined capacity of LCC and CC falls to 30%
 - Proposed change would trigger Stage 2 when the combined capacity of LCC and CC falls to 35%
 - Irrigation of landscaped areas, whether with an irrigation system, **a hand-held method, or a drip irrigation system shall be limited to once every other week.**
- Stage 3.
 - Currently triggered when the combined capacity of LCC and CC falls to 20%
 - Proposed change would trigger Stage 3 when the combined capacity of LCC and CC falls to 25%

Staff Recommendation

- Staff recommends the approval of the proposed revisions to the DCP to provide a framework for the community while CCW secures a drought-proof water supply to benefit all residents.



Corpus Christi Water **Conservation**

Water Conservation 365 Program

Save water, today and every day, for tomorrow.



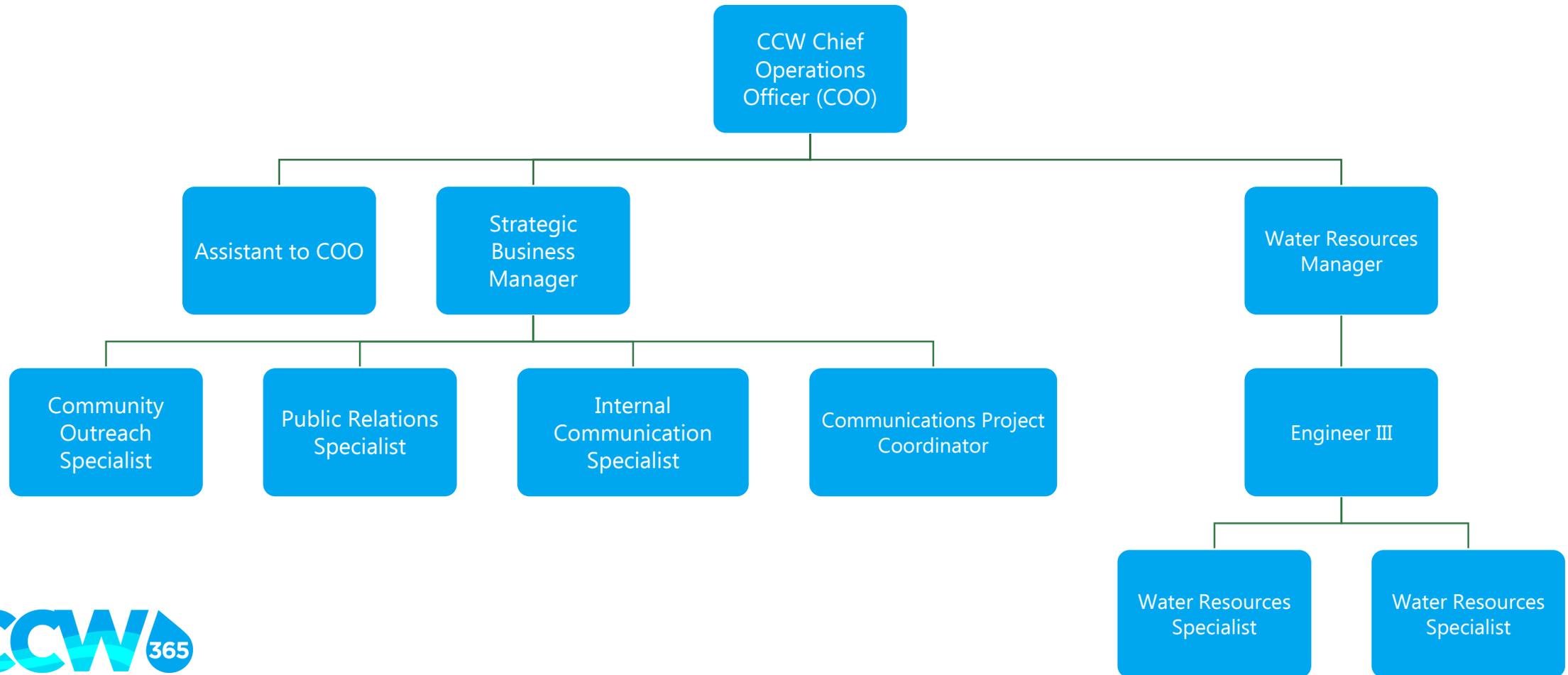
Program Overview

- Reduce total per capita consumption by 1% annually over the next decade.
 - That translates to reducing water use by just over a half-gallon per person per day (approximately 0.6 gallons).
- Industrial Optimization.
- Conservation Ordinances.
- Strengthened Conservation Measures at City-Owned Facilities.
- Public Education.

Implementation

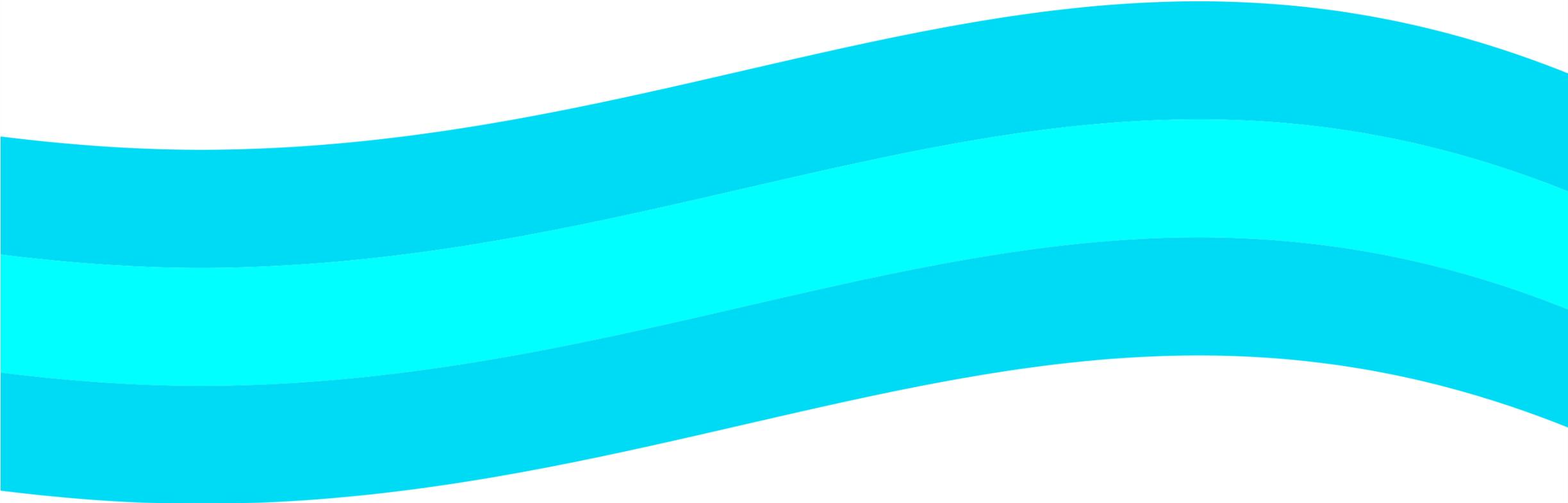
- 3-month goal.
 - Develop Conservation 365 Program and launch Water Data Dashboard.
 - Successful Xeriscape Symposium.
 - Hiring of 2 additional staff as approved in the FY23 budget.
- 6-month goal.
 - Begin providing curriculum to Independent School Districts on water conservation and our watersheds using the Nueces River Authority partnership.
- 12-month goal.
 - Educate 15% of residents using Texas AgriLife Extension.
 - Expand the use of reclaimed wastewater for irrigation of city properties.
 - Industrial Optimization.

Organizational Chart



Resources and Outreach

- Resources.
 - Texas A&M Engineering Extension Service, Texas Water Development Board, Texas Commission for Environmental Quality, Nueces River Authority, Texas A&M AgriLife Extension, Nueces County Master Gardeners, South Texas Botanical Gardens, Coastal Bend Bays and Estuaries.
- Outreach.
 - Radio, TV, and Traditional Media.
 - Website and Social Media.
 - In-person events.
 - Big Bloom at South Texas Botanical Gardens.
 - Earth Day Bay Day hosted by CBBEP.
 - Oso Bay Wetlands Preserve.
 - Presentations.
 - Schools.
 - Civic organizations.
 - PSAs from Mayor and Council.

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Thank you!

