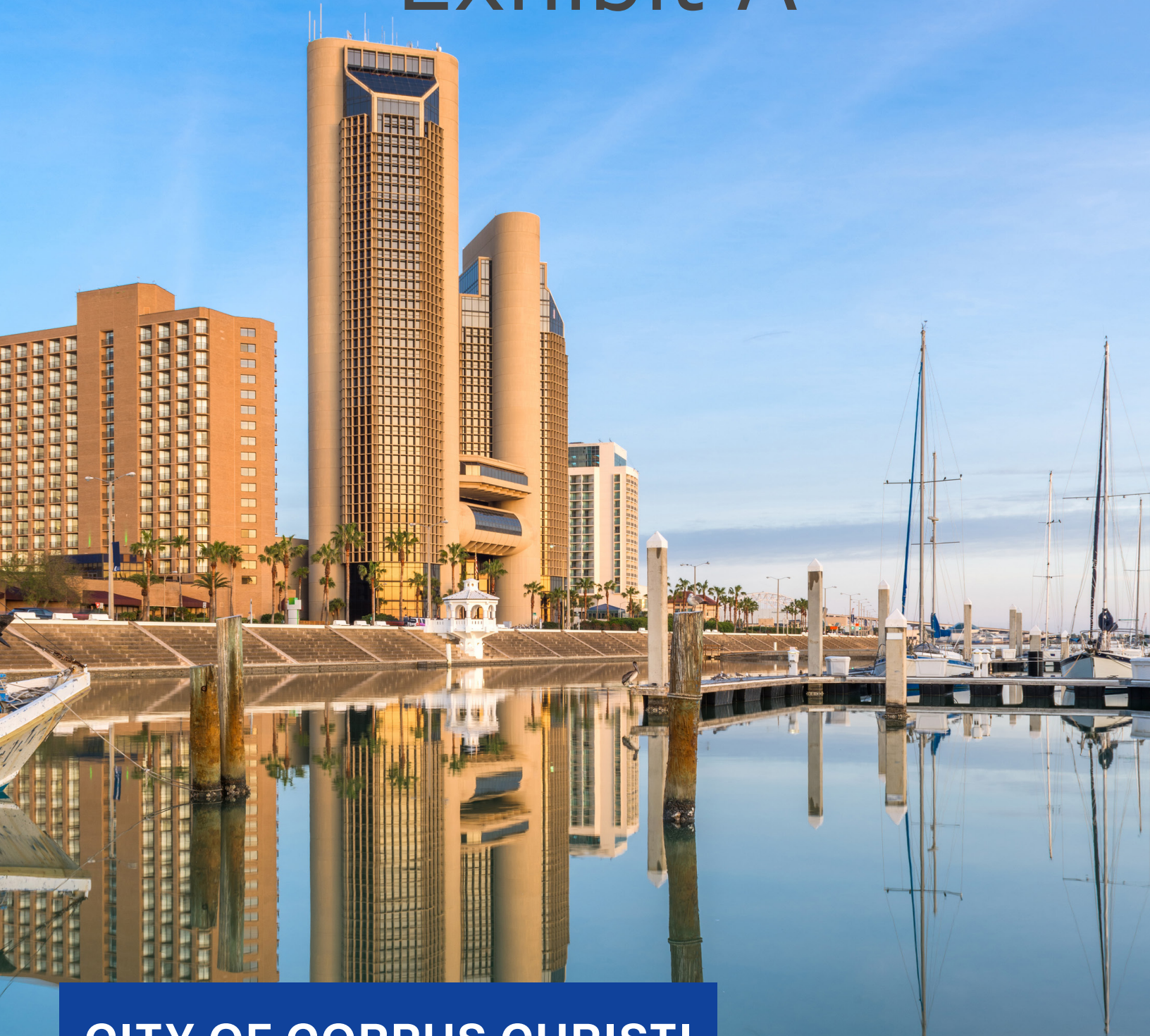


Exhibit A



CITY OF CORPUS CHRISTI

2025 Water Conservation Plan

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1.0 Welcome

Dear Community Members,

Water has always defined Corpus Christi, including our name, our economy, and our quality of life. But what sets our community apart is not rapid population growth; it is our uniquely high and complex water demand driven by a substantial industrial base. Refineries, petrochemical facilities, the Port of Corpus Christi, and other major industries are essential to our local and regional economy, yet they place significant, continuous demands on our water system. As a result, Corpus Christi must plan not only for residents, but for one of the most industrially intensive water use profiles in Texas.

For generations, this community has depended on the same surface water sources, which now face unprecedented stress. Our greatest challenge is not simply growth. It is sustaining both our community and our economic engine by maintaining a strong, reliable water system in the face of declining reservoir levels, climate extremes, and rising infrastructure costs.

The City's primary water sources, Choke Canyon Reservoir and Lake Corpus Christi, reached historic lows in 2025, with combined storage falling below 10%. Extended drought, record heat, and reduced inflows have made water conservation not just prudent, but essential. While supplemental supplies from Lake Texana and the Colorado River have helped stabilize operations, these sources remain vulnerable to curtailment and cannot alone ensure long-term reliability—especially given the scale and consistency of industrial demand.

The overarching goal of this 2025 Water Conservation Plan is to meet Corpus Christi Water's current and future needs by ensuring a reliable, resilient, and sustainable water supply for our residents, businesses, and industries. Achieving this requires balancing efficiency with economic vitality and proactively managing demand across all sectors.

This plan calls for a renewed focus on efficiency, education, and partnership. It establishes clear, measurable goals, including reducing total gallons per capita per day across residential, commercial, institutional, and industrial sectors while maintaining system losses below 10% and keeping the Infrastructure Leakage Index (ILI) at or under 3. These targets reflect our commitment to managing every drop responsibly while supporting the industrial base that underpins our economy.

Conservation is no longer just an environmental ideal; it is the most immediate and cost-effective tool we have to extend existing supplies while new sources are developed. Every gallon saved

through improved efficiency, modernized infrastructure, and informed water use helps preserve reservoir storage, reduce treatment costs, and maintain reliability for both households and industry.

The 2025 Water Conservation Plan builds on prior efforts while addressing today's realities, including persistent drought, evolving climate conditions, and the demands of a water-intensive economy. It outlines specific actions to reduce demand, minimize losses, and integrate conservation into everyday practices across all sectors.

Safeguarding our water future requires shared responsibility. Through education, partnerships, and forward-looking planning, we can protect this critical resource while continuing to support economic strength and community well-being. With collaboration among city leadership, regional partners, industry, and the public, Corpus Christi will maintain a resilient water system capable of meeting today's needs and securing tomorrow's future. Building on this strong foundation, Corpus Christi Water is advancing strategic investments to secure the region's long-term water future. These efforts include developing new supplies through desalination, expanding groundwater access, and enhancing infrastructure to improve delivery and system connectivity. By diversifying its water portfolio and strengthening resilience, the city is reducing dependence on traditional sources, preparing for drought conditions, and supporting sustainable regional growth.

Thank you for your commitment to sustaining Corpus Christi's most essential resource: our water.



Nick Winkelmann

**Chief Operating Officer
Corpus Christi Water**

2.0 Executive Summary

Corpus Christi’s water supply is anchored in a highly integrated regional system that draws from multiple surface water sources across South and Central Texas, including the Nueces and Colorado River basins. Key supplies—Choke Canyon Reservoir, Lake Corpus Christi, and Lake Texana—are connected via the Mary Rhodes Pipeline System, enabling flexible water movement to meet municipal, industrial, and environmental needs across the Coastal Bend.

This diversified portfolio supports a population of more than half a million residents while also sustaining one of the region’s most significant industrial corridors. Water delivered through this system undergoes treatment at the O.N. Stevens Water Treatment Plant, ensuring a consistent supply of high-quality water for households, businesses, and major industrial users.

Quick Stats Bar

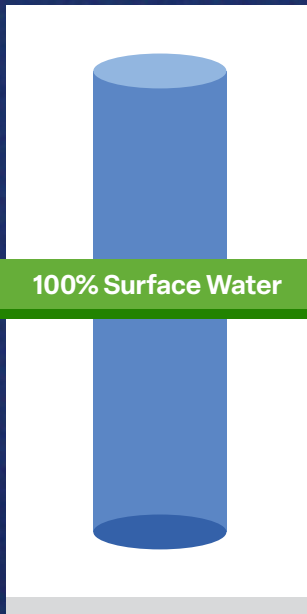
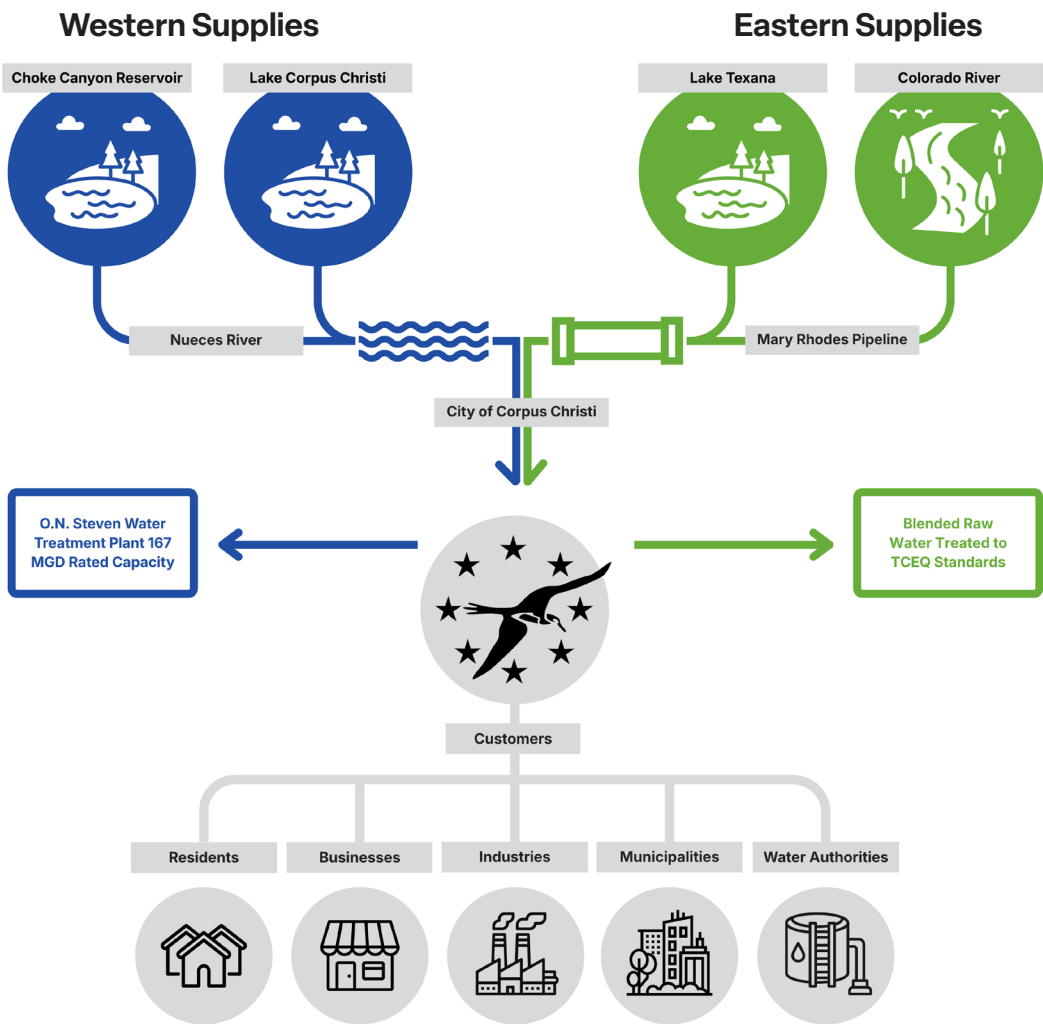
- 4 Major Sources
- 500,000+ People Served
- 23 Billion Gallons of Treated Water Per Year = 100 Million Gallons Per Day (MGD)
- Reclaimed Water for Parks, Golf Courses, and Industry
- Added in 2025



Eastern Well Field – 11 MGD

Western Well Field – 17 MGD

2.1 Our Water Resources



2.2 The State of Our Water Supply

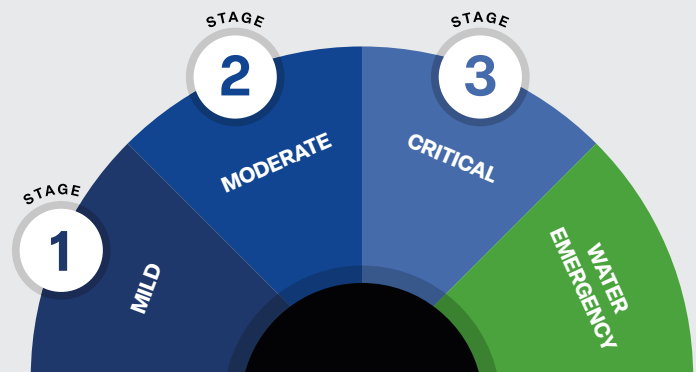
Corpus Christi's regional water system is the foundation of South Texas's economy and quality of life, serving approximately half a million residents and industries across the Coastal Bend. As of 2025, the region faces some of the most challenging supply conditions in history. Combined storage in the Choke Canyon and Lake Corpus Christi reservoirs has fallen to critically low levels due to prolonged drought, record heat, and record low inflows throughout the Nueces River Basin. Supplemental sources such as Lake Texana and the Colorado River (via the Mary Rhodes Pipeline) have become increasingly essential to maintaining daily operations, highlighting the urgent need for conservation and resource diversification.

Over the past decade, declining rainfall and rising temperatures have placed increasing stress on the region's water supplies. In 2024 and 2025, average annual rainfall across the Nueces River Basin fell well below normal, while summer temperatures reached record highs, accelerating evaporation and reducing inflows to Choke Canyon and Lake Corpus Christi. The correlation between these prolonged dry, hot conditions and the sharp decline in reservoir storage underscores how climate extremes directly impact local water availability. These patterns highlight the need for continued conservation and adaptive management to preserve limited supplies during extended droughts.

Drought Stages & Triggers

Drought Stage	Combined Reservoir Level	Target Water Demand Reduction Goal
Water Shortage Watch	<50%	5%
Stage 1 - Mild	<40%	5%
Stage 2 - Moderate	<30%	10%
Stage 3 - Critical	<20%	15%
Water Emergency Level 1 Level 2	Other Triggers (See Drought Contingency Plan)	25% 50%

Water Shortage Conditions



Drought Status Meter

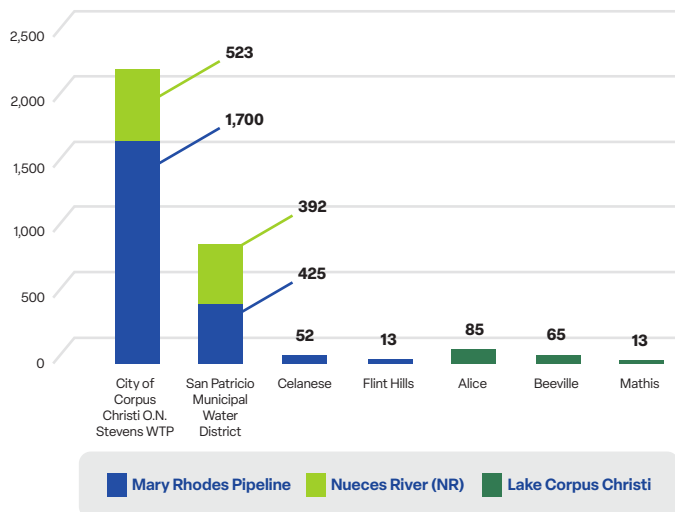
Combined storage levels of Choke Canyon Reservoir and Lake Corpus Christi:

10.0%
As of 01.15.2025

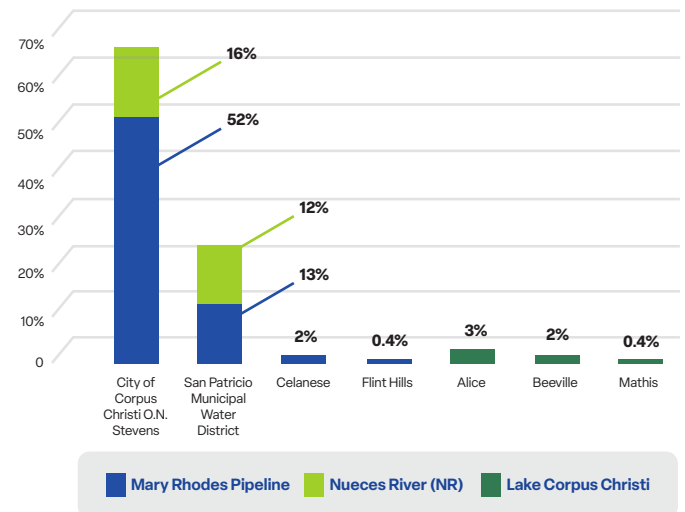
2.3 How We Use Our Water

On Average, Corpus Christi Residents Use 60 Gallons Per Person Per Day

Total Raw Water Gallons Used by Source & Location (MGal)



Percent of Raw Water Used by Source & Location (%)



Percentage of Water Consumption by Category

(Based on 2020-2024 Average Yearly Consumption in MG)

Residential
(Single-Family &
Multi-Family)

32.1%

Institutional

3.5%

Industrial

49.6%

Commercial

14.5%

Other Authorized

0.3%

2.4 Existing Conservation & Efficiency Programs

The City of Corpus Christi promotes responsible water management to protect resources and support growth. Through education and partnerships with schools and businesses, the City encourages efficient water use and long-term stewardship, building a sustainable and resilient water future. Statistics for public information outreach can be found in Section 9.

Education and Outreach

School Programs:

Learning to Be Water Wise (5th Grade): Introduces students to the water cycle, local sources, and conservation through hands-on activities.

Water Source Book (Grades 6–8): A middle school curriculum connecting science and geography lessons on sustainable water use and pollution prevention.

Coastal Bend Teacher Resources: Provides teachers with lesson plans, classroom kits, and field trip ideas focused on local water management.

City-Led Water Efficiency Efforts:

Reclaimed Water Program: Corpus Christi Water's reclaimed water program is evolving from a conservation-focused initiative into a key component of the city's long-term water supply strategy. Historically used for non-potable purposes like irrigation and construction, often at low or no cost during drought, the program helped reduce demand on limited potable supplies. It is now shifting toward large-scale industrial reuse, anchored by agreements with Valero and Flint Hills. The 30-year Valero agreement will supply up to 8 MGD through privately funded infrastructure that will ultimately transfer to the City, while the Flint Hills agreement will provide up to 2 MGD with customer-funded on-site treatment. Together, these projects create about 10 MGD of consistent demand, significantly advancing the City's reuse goals.

Reclaimed Water Distribution Stations: Established in 2025, Corpus Christi Water offers Type I and Type II treated wastewater in bulk for construction and other non-drinking uses. This recycled water helps conserve our drinking water supply and is currently available at no subscription cost. The reclaimed water will be processed and collected at the City's Oso Wastewater Treatment Plant.

Infrastructure Efficiency: Replacement of outdated plumbing fixtures, adoption of rainwater harvesting systems available for City departments, and Xeriscape landscaping for city facilities.

Leak Detection: A full-time team conducts 24/7 leak detection and repairs to minimize water loss.

Community Education:

The Xeriscape Learning Center and Design Garden demonstrates sustainable, drought-tolerant landscaping. Visitors learn how proper plant selection, soil management, and efficient irrigation reduce water use without sacrificing beauty. Self-guided tours, workshops, and events engage homeowners, professionals, and students in hands-on conservation practices.

Public Information Campaigns:

Citywide outreach through social media, TV, radio, print, and billboards promotes everyday water-saving actions—like fixing leaks and adjusting sprinklers. The Water Hotline (361-826-1600) connects residents with free conservation kits, educational materials, and expert guidance to support responsible water use.

Incentives and Pricing:

Tiered Rate Structure: Corpus Christi Water uses a tiered rate structure to promote responsible water use and ensure long-term sustainability of the community's water supply. Under this system, the cost of water increases in stages based on how much a customer uses, charging higher rates for higher levels of consumption. This approach encourages conservation, supports infrastructure investment, and helps manage demand during periods of limited water availability.



2.5 Key Strategies & Quantifiable Target Goals

Corpus Christi's 2025 Water Conservation Plan translates long-term sustainability goals into clear, measurable performance targets. These metrics track annual progress toward reducing water use, improving efficiency, and enhancing system reliability across the Coastal Bend. Each goal aligns with the City's core objectives, promoting conservation, strengthening infrastructure, engaging the community, and ensuring preparedness during drought. Together, these metrics provide a transparent framework for accountability and continuous improvement, allowing the City to evaluate performance, prioritize investments, and demonstrate measurable water savings year over year.

The plan's metrics span eleven focus areas, each designed to strengthen reliability and efficiency throughout the water cycle: reducing daily water use, improving system performance, expanding reuse, and promoting responsible water management at every level. Annual goals include lowering per capita consumption by 1% each year, reducing system water loss by 1% annually, expanding reclaimed water use by 5% annually, and achieving 90% compliance with drought restrictions. Broader program objectives include upgrading metering technology, supporting industrial and wholesale customer conservation, enhancing leak detection, and ensuring that all new development meets modern efficiency standards.

Water Use Reduction 	Metric: Gallons per capita per day (GPCD) of total municipal water use reduction.	Goal 1: Reduce GPCD by 1% annually. This equals to a drop of 12 GPCD by 2030.	
	Metric: Percentage reduction in summer period (July 1 to September 30) demand compared to the baseline year.	Goal 1: Reduce summer period peak demand by 10%. This equals to a reduction of 1.8 million gallons of water per day during the three-month period.	
System Efficiency/Water Loss Control 	Metric: Total water loss reduction.	Goal 1: Reduce total water loss by 1% annually. This equals a reduction of 51,124 gallons per day.	Goal 2: Implement a Water Loss Task Force to assess/identify opportunity areas for apparent and real water loss.
	Metric: Miles of water inspected and rehabilitated per year.	Goal 1: Implement a proactive leak detection and management program.	Goal 2: Inspect 25% of the distribution system annually with leak detection equipment. This equals to 425 miles of pipeline per year.
Public Education & Outreach 	Metric: Number of conservation outreach events held.	Goal 1: Conduct at least 75 community outreach events per year.	
	Metric: Number of students reached through school education programs.	Goal 1: Deliver conservation curriculum to at least 12,000 students annually.	

Landscape Irrigation Management (Residential Irrigation Assessments)



Metric: Number of violations issued/warnings for non-compliance with watering schedules during drought stages in accordance with the City's approved Drought Contingency Plan.

Goal 1: Reduce irrigation violations by 10% annually through enforcement and education.

Metering, Monitoring, & Data



Metric: Percent of customer accounts with advanced metering infrastructure (AMI).

Goal 1: Install AMI for 10% of accounts annually until 100% achieved.

Metric: Average time between meter reads and billing (billing accuracy).

Goal 1: Maintain billing accuracy above 98%.

Metric: Number of leak alerts sent to customers through AMI.

Goal 1: Provide at least 1,000 leak notifications per year once AMI is in place.

Reuse & Alternative Water Supply



Metric: Gallons of treated effluent reused annually.

Goal 1: Expand reuse water deliveries by 5% annually.

Metric: Percent increase in reuse connections.

Goal 1: Add 1-5 new reuse customers per year.

Metric: Increase reuse from golf courses, parks, and others to the reclaimed system (for irrigation).

Goal 1: Add 1 park or golf course to reclaimed water annually.

Drought Contingency Integration



Metric: Compliance rate with drought restrictions (measured via inspections/citations).

Goal 1: Achieve 90% compliance with restrictions on each drought stage.

Metric: Reduction in demand during drought stage activation (% below baseline).

Goal 1: Reduce water demand by 1-25% during drought triggers.

Metric: Development and implementation of year-round restrictions (typically in DCPs), such as twice per week watering.

Goal 1: Implement twice per week watering restrictions year-round (or other from DCP; then evaluate DCP stages).

New Development & Building Standards



Metric: Number/percentage of new developments meeting water-efficient building codes.

Goal 1: Ensure 100% compliance with plumbing code requirements for low-flow fixtures in new construction and major renovations.

Wholesale Customer Conservation



Metric: Number of wholesale customers submitting annual conservation reports.

Goal 1: Achieve 100% annual reporting compliance from all wholesale customers.

Metric: Wholesale customers adopting new water conservation programs.

Goal 1: Assist at least 1 wholesale customer per year in adopting new conservation programs.

Industrial, Commercial & Institutional (ICI) Programs



Metric: ICI sector benchmarking, identification of high-water users, and the number of water efficiency assessments delivered.

Goal 1: Identify high water-use ICI customers and offer them annual, no-cost, voluntary water efficiency assessments that identify efficiency opportunities, potential cost savings, and payback periods.

Metric: Estimated water savings identified through completed ICI assessments.

Goal 1: Track estimated water savings identified through the completed ICI assessments.

Metric: Verified water savings achieved by customers as a result of implementing recommended efficiency measures.

Goal 1: Track verified customer water savings resulting from implementation of assessment report recommendations.

Metric: Gallons of water savings from industrial best practices.

Goal 1: Secure at least 1% of annual water savings from ICI efforts. This equals to 432,876 gallons of water per day.

Metric: Encourage organizations to establish water use intensity as defined by a consistent denominator relevant to their sector (e.g., water use per square footage, per ton of product, per unit manufactured, per revenue dollar). Both absolute water use and intensity should be tracked.

Goal 1: Participating organizations are encouraged to adopt a water use intensity target defined by a certain percentage over a set number of years.

Ordinance Development, Review, & Enforcement



Metric: Strengthen ordinances and ensure alignment with existing and future programs.

Goal 1: Review existing water conservation-related ordinances (if applicable) and consider developing/updating them to align with strategic target goals.





2.6 Additional Water Supply Projects & Strategies

Corpus Christi Water is advancing a range of future projects to secure a reliable and sustainable water supply for the community. These efforts include developing new water sources through desalination, reuse, groundwater, and investing in infrastructure to treat and deliver water where it is needed. By diversifying supply and strengthening system connections, the city is working to reduce reliance on traditional surface water sources, improve resilience during drought conditions, and support long-term growth in the region.

Water Supply Target Goals by Type

Category	Baseline	5-Year Target	10-Year Target
Surface Water	100%	50–65%	40–55%
Groundwater (Incl. Eells)	0%	30–45%	20–30%
Desalination	0%	5–10%	20–30%

Evangeline Groundwater Project

In October 2025, the City Council approved a \$169.5 million Groundwater Rights Purchase and Sale Agreement with Evangeline/Laguna, LP, along with related agreements with the City of Sinton and the St. Paul Water Supply Corporation. This agreement secures 24 million gallons per day (MGD) of groundwater rights from the Evangeline Aquifer, with the first 12 MGD phase expected online by late 2026. Pre-engineering, permitting, and hydrogeologic modeling are underway to finalize well-field design, pipeline alignment, and integration with the Mary Rhodes Pipeline System. Once operational, this project will provide a reliable drought-resistant source to supplement the City's surface water supplies.

Inner Harbor Seawater Desalination Project

The proposed Inner Harbor Seawater Desalination Water Treatment Plant will be able to produce up to 30 million gallons of clean, safe drinking water daily for Corpus Christi Water customers. Located at the corner of Nueces Bay Boulevard and West Broadway Street, with intake and discharge structures to be built within the secured part of the Inner Harbor Ship Channel. This desalination plant is an excellent project for creating a drought-resistant water supply, due to how close it is to our entire community's water distribution system and access to seawater. Moreover, the Inner Harbor facility will enhance the resilience of the CCW system by operating independently of the existing O.N. Stevens surface water treatment plant. The City has secured all necessary regulatory permits for the design and construction of the plant.

Harbor Island Seawater Desalination Agreement

The Council also authorized an agreement with the Nueces River Authority (NRA) to reserve 50 MGD of capacity from the proposed Harbor Island Seawater Desalination Plant, part of the NRA's New Water for South Texas Plan. The \$2.7 million option secures future access to desalinated water once the 100 MGD regional facility becomes operational, aligning with state-level initiatives encouraging large-scale, multi-jurisdictional water projects.

Additional Water Supply Strategies

The City continues to expand groundwater production from the Nueces River well field, advance brackish-water development through the EV Ranch Project, and increase the use of reclaimed water for irrigation and industrial purposes. Collaboration with the South Texas Water Authority is also ongoing to enhance treated-water delivery capacity. In parallel, the City and the Corpus Christi Aquifer Storage and Recovery Conservation District (CCASRCD) are evaluating aquifer storage solutions to capture excess water during wetter periods and recover it during times of drought. Additionally, the City is exploring and considering other desalination projects as part of its long-term water supply strategy.

Collectively, these efforts reflect Corpus Christi's commitment to a comprehensive and regionally coordinated approach, one that emphasizes innovation, diversification, and responsible resource management to ensure a sustainable water future for residents, businesses, and industries across the Coastal Bend.



2.7 Limitations Of GPCD as a Benchmark for Corpus Christi

Using Gallons Per Capita Per Day (GPCD) as a measure of water efficiency can be misleading for Corpus Christi due to the City's distinctive water demand characteristics. While GPCD is a common benchmark for comparing municipal water use, it assumes that most water consumption is residential or commercial and directly tied to population. In Corpus Christi, however, a significant portion of total water demand comes from industrial customers, particularly in the petrochemical, refining, and manufacturing sectors that support the regional economy.

Because GPCD divides total water use by population, the inclusion of significant industrial water use skews the metric, making Corpus Christi appear to have higher per-person water use than similar-sized cities with smaller industrial bases. As a result, the metric does not accurately reflect residential efficiency or conservation progress.

Moreover, Corpus Christi's role as a regional water supplier further complicates direct comparisons. The City provides water not only for its residents but also to surrounding communities and industries throughout the Coastal Bend area. These wholesale and industrial demands fall outside traditional residential patterns, yet they are included in the City's total consumption figures.

For these reasons, GPCD alone does not fully capture the effectiveness of Corpus Christi's conservation programs or operational efficiency. A more representative assessment would include sector-specific metrics, such as separate tracking of residential, commercial, institutional, and industrial GPCD, along with efficiency ratios or total system demand relative to economic output. These measures would provide a clearer picture of the City's dual commitment to supporting economic growth while promoting responsible water use.

Next Steps: Developing Improved Water Benchmarking Tools

Given Corpus Christi's diverse customer base and industrial demand, refining water-use benchmarking is essential to better evaluate efficiency across sectors. The City plans to develop a more representative framework that distinguishes between Residential, Commercial, Institutional, and Industrial water use. This approach will provide clearer insights into consumption patterns, conservation progress, and resource management.

Establish Sector-Specific GPCD Metrics

Instead of a single, citywide Gallons Per Capita Per Day (GPCD) figure, Corpus Christi plans to track and report separate metrics for each major category of use:



Residential GPCD: Measures per capita water use by households, reflecting direct community conservation performance. This metric should serve as the primary benchmark for evaluating public outreach, education, and rebate program effectiveness.

Commercial GPCD: Tracks water use for businesses such as offices, retail, restaurants, schools, government buildings, hospitals, and public facilities. Benchmarking this category helps identify opportunities for efficiency improvements in non-residential but population-related sectors.

City Industrial GPCD (or Industrial Use): Calculated and reported separately from population-based metrics. This category captures large-scale, process-related water use associated with the region's refineries, petrochemical plants, and manufacturing facilities. Because industrial demand is not population-driven, separating it avoids distorting the overall GPCD and provides a fairer assessment of residential and community efficiency.

Wholesale: Wholesale will be recorded separately.

By tracking these four metrics independently, Corpus Christi can more accurately compare performance across customer classes and align conservation efforts with specific water-use patterns. In addition, Corpus Christi will evaluate the following initiatives:

Develop Industrial Water Intensity Benchmarks

Beyond total use, the City plans to collaborate with industrial customers to create water-intensity benchmarks, such as gallons of water per unit of output (e.g., per barrel of product, per ton processed, or per megawatt-hour generated). These indicators provide production-based efficiency measures, allowing industries to assess performance relative to peers and identify opportunities for improvement.

Conduct Voluntary Water Audits & Data Collaboration

Partner with major industrial and commercial customers to perform voluntary water audits. These audits will help identify process inefficiencies, potential reuse systems, and technology upgrades. Aggregated, anonymized results can inform regional benchmarks and guide targeted efficiency programs.

Create a Corpus Christi Water Efficiency Dashboard

Develop a Water Efficiency Dashboard that consolidates data from all sectors, Residential, Commercial, and Industrial, into a single reporting platform. The dashboard would display year-over-year trends, GPCD by sector, and progress toward conservation goals, increasing transparency and accountability.

Integrate Sector Metrics into Long-Term Planning

Incorporate the new sector-based GPCD metrics and industrial benchmarks into the City's Water Conservation and Drought Contingency Plans. These distinctions will improve forecasting accuracy, support reclaimed water planning, and ensure conservation goals are aligned with sector-specific realities.

3.0 Introduction & Objective

Water supply has always been a key issue in the development of Texas. In recent years, increasing economic development across Texas has led to growing demands for water supplies. Severe drought conditions in the recent past highlight the importance of the efficient use of our existing supplies to make them last as long as possible. Extending current supplies will delay the need for new supplies, minimize the environmental impacts associated with developing new supplies, and delay the cost of additional water supply development. Recognizing the need for efficient use of existing water supplies, the Texas Commission on Environmental Quality (TCEQ) has developed guidelines and requirements governing the development of water conservation plans. The TCEQ guidelines and requirements are included in Appendix B. The City of Corpus Christi (the City) has developed this Water Conservation Plan (Plan) in accordance with TCEQ guidelines and requirements.

The 2025 Water Conservation Plan replaces the previous Plan, adopted October 13, 2020. This Plan reflects the City's commitment to water conservation and efficiency strategies that safeguard regional water supplies, promote responsible use across all customer sectors, and ensure long-term water reliability for the Coastal Bend. It builds upon decades of local and regional planning to reduce per capita demand, minimize system losses, expand reuse and alternative supplies, and foster a culture of stewardship through education, innovation, and equitable access to conservation resources.



Table 1-1: Abbreviations

Abbreviation	Full Nomenclature
AMI	Advanced Metering Infrastructure
AMR	Automated Meter Reading
AWWA	American Water Works Association
BMP	Best Management Practices
EPA	Environmental Protection Agency
HOA	Homeowners' Association
ICC	International Code Council
ICI	Industrial, Commercial, Institutional
ILI	Infrastructure Leakage Index
LNRA	Lavaca-Navidad River Authority
MGD	Million Gallons per Day
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
TWDB	Texas Water Development Board
UARL	Unavoidable Annual Real Losses
WCP or Plan	Water Conservation Plan

The objectives of this Plan are as follows:

- ✓ To reduce water consumption from the levels that would prevail without conservation efforts;
- ✓ To reduce the loss and waste of water;
- ✓ To improve efficiency in the use of water;
- ✓ To encourage efficient outdoor water use;
- ✓ To report the level of recycling and reuse in the water supply; and
- ✓ To extend the life of current water supplies by reducing the rate of growth in demand.

The Plan charts a path to achieve lasting water conservation savings that preserve existing supplies and protect customers from unnecessary costs.

4.0 Regulatory Basis for Water Conservation Plan

TCEQ RULES GOVERNING CONSERVATION PLANS

TCEQ rules governing the development of water conservation plans for public water suppliers are contained in Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2 of the Texas Administrative Code (TAC), which is included in Appendix B. For these rules, a water conservation plan is defined as “a strategy or combination of strategies for reducing the volume of water withdrawn from a water supply source, for reducing the loss or waste of water, for maintaining or improving the efficiency in the use of water, for increasing the recycling and reuse of water, and for preventing the pollution of water.”

5.0 Description of Water Sources

The City serves as the regional water provider for the Coastal Bend, delivering safe and reliable drinking water to more than half a million residents, businesses, industries, and wholesale customers across a multi-county area. Operating in one of Texas’s most drought-prone regions, the City’s water supply system is strategically designed to ensure long-term reliability through a diversified portfolio of surface water sources, legally secured water rights, strategic storage, and extensive conveyance infrastructure.

A critical component of this reliability is the City’s portfolio of water rights, which varies in seniority, firm yield, and susceptibility to regulatory curtailment during drought conditions. Senior water rights, particularly those associated with the Nueces River system, provide a higher level of supply security, while more junior or interruptible rights, including certain transferred or imported supplies, may face curtailment under priority administration by the Texas Commission on Environmental Quality (TCEQ). As a result, the City actively manages its system to balance these risks, leveraging storage, interconnections, and operational flexibility to maintain supply during periods of reduced availability.

Surface water remains the cornerstone of Corpus Christi’s supply portfolio. Major sources include Lake Corpus Christi and Choke Canyon Reservoir on the Nueces River system, Lake Texana via the Lavaca-Navidad River Authority, and Colorado River water conveyed through the Mary Rhodes Pipeline. Together, these sources form an integrated regional network managed by Corpus Christi Water Utilities in coordination with the Nueces River Authority, Lavaca-Navidad River Authority, and TCEQ to optimize reliability, regulatory compliance, and drought resilience.

The Mary Rhodes Pipeline is a critical piece of this system, serving as a large-diameter, long-distance conveyance facility that transports water from multiple basins into the City’s supply network. Originally constructed to deliver water from Lake Texana, the pipeline has since been expanded and integrated with additional interconnections to convey Colorado River supplies and other contracted sources. The system includes multiple pump stations, delivery points, and interties that enable operational flexibility, allowing the City to shift between sources based on availability, water rights conditions, and system demand. This infrastructure not only diversifies the City’s supply geographically but also mitigates risks associated with localized drought, basin-specific regulatory restrictions, and curtailment of junior water rights. However, because portions of the conveyed supplies are subject to differing legal and contractual frameworks, including interruptible agreements, the pipeline’s operation is closely managed to account for potential curtailment scenarios and ensure continuity of service.

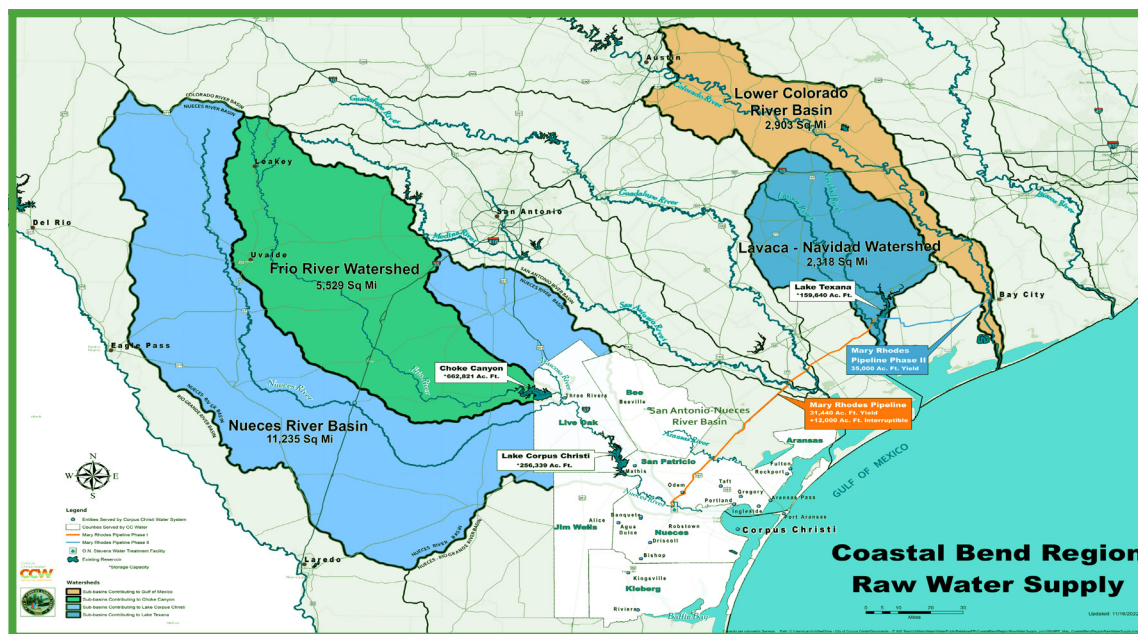
In addition to managing raw water supply and conveyance, the O.N. Stevens Water Treatment Plant in Calallen treats all potable water for the City and its wholesale customers, ensuring compliance with state and federal drinking water standards. The City’s wastewater utility further supports regional sustainability through reclamation, treatment, and discharge operations across six regional wastewater treatment plants. The following sections detail each of the four major surface water sources, highlighting their geographic location, capacity, ownership, water rights characteristics, including seniority and curtailment risk, and their operational significance to the City’s long-term water security and resilience strategy.

5.1 Lake Corpus Christi

Lake Corpus Christi, completed in 1958 with the construction of the Wesley Seale Dam on the Nueces River, is a major water supply reservoir for the City of Corpus Christi. Situated about 33 miles northwest of the City, it has a full-capacity elevation of 94 feet above mean sea level and a storage capacity of 256,339 acre-feet, or roughly 83.5 billion gallons. Covering nearly 19,748 acres (about 31 square miles), the lake serves both municipal and recreational purposes. It forms part of the Nueces River Basin, which is primarily fed by the Nueces, Frio, and Atascosa Rivers, with inflows from the Frio River first collected by Choke Canyon Reservoir upstream before joining Lake Corpus Christi.

The Nueces and Frio River basins together span roughly 16,764 square miles, capturing rainfall from varied climatic regions. However, because streamflow is highly dependent on seasonal rainfall, the lake's water levels can fluctuate significantly during droughts, underscoring the importance of Corpus Christi's diversified water supply system. Beyond supplying municipal water, Lake Corpus Christi also provides ecological and recreational benefits, supporting wildlife habitats, regional tourism, and the health of the Nueces Estuary—one of Texas's most productive coastal ecosystems.

Figure 5-1: Corpus Christi Service Water Sources



5.2 Choke Canyon Reservoir

Choke Canyon Reservoir, located about 70 miles northwest of Corpus Christi in Live Oak and McMullen Counties, is the largest storage reservoir in The City's water supply system and a cornerstone of its long-term water security. Completed in 1982 by the U.S. Bureau of Reclamation as part of the Nueces River Project, the reservoir provides flood control and a dependable raw water source for municipal, industrial, and agricultural use across the Coastal Bend. At full capacity, it holds approximately 662,821 acre-feet (around 215 billion gallons) of water at an elevation of 220.5 feet above mean sea level, spanning nearly 26,000 acres. Together with Lake Corpus Christi, it forms the backbone of the Nueces River Basin storage system, capturing inflows primarily from the Frio River Watershed.

Beyond its storage and flood-control functions, Choke Canyon Reservoir plays a vital role in balancing The City's overall water operations and supporting regional ecosystems. Its upstream location provides protection from flooding while enabling regulated downstream releases that sustain municipal supply and environmental flows to the Nueces Delta and estuary. Jointly managed by The City of Corpus Christi, the Nueces River Authority, and Texas Parks and Wildlife Department, the reservoir and adjacent Choke Canyon State Park also support recreation, tourism, and wildlife conservation, reinforcing its value as both an operational and ecological asset to South Texas.

5.3 Lake Texana

Lake Texana, located about 90 miles northeast of Corpus Christi in Jackson County, is a key inter-basin water source that strengthens the City's long-term water security and diversification strategy. Completed in 1980 with the construction of the Palmetto Bend Dam on the Navidad River, the reservoir is owned and operated by the Lavaca-Navidad River Authority (LNRA). With a storage capacity of 161,085 acre-feet (about 52.5 billion gallons) and a surface area of 9,727 acres, it provides raw water to Corpus Christi through the Mary Rhodes Pipeline System—a 101-mile, 64-inch transmission line completed in 1998 that delivers water directly to the O.N. Stevens Water Treatment Plant. The City's contract with LNRA, established in the 1990s after a historic drought, secured 31,440 acre-feet per year of supply.

Lake Texana and the Mary Rhodes Pipeline together provide 40 to 70 percent of Corpus Christi's raw water under normal conditions, offering vital hydrologic diversity and reliability during droughts when local reservoir inflows are low. Beyond municipal use, the lake supports regional agriculture, industry, recreation, and wildlife habitats, contributing to both ecological balance and economic vitality in the area. The success of this system also paved the way for future inter-basin transfer initiatives, including the Mary Rhodes Pipeline Phase II, which further enhances Corpus Christi's capacity to draw water from multiple watersheds across South Texas.

5.4 Colorado River

The Colorado River is the newest addition to Corpus Christi's diversified water supply system and a major milestone in securing long-term, reliable surface water from multiple basins. Located in Matagorda County, this source connects to the City's network through the Mary Rhodes Pipeline Phase II, which extends 42 miles from the Colorado River near Bay City to Lake Texana and the existing Phase I pipeline. The City's 1992 agreement with the Garwood Irrigation Company granted rights to purchase up to 35,000 acre-feet per year of run-of-the-river water, expanding Corpus Christi's portfolio beyond the Nueces and Lavaca-Navidad basins. Phase II of the pipeline was completed in 2016 after years of coordination among regional and state agencies. The project now provides a seamless 140-mile inter-basin transfer system linking the Colorado River to the O.N. Stevens Water Treatment Plant.

Water from the Colorado River serves as a strategic reserve. Its inclusion strengthens the City's hydrologic diversity and operational flexibility, enabling balanced withdrawals across multiple watersheds while supporting environmental and agricultural needs upstream. The system's reach across diverse climatic zones—from the Hill Country to the Gulf Coastal Plain—offers vital protection against localized droughts. Overall, the Colorado River supply and Mary Rhodes Pipeline Phase II highlight Corpus Christi's long-term commitment to regional cooperation and sustainable water management for future growth and resilience.

6.0 Description of Service Area & Utility Profile

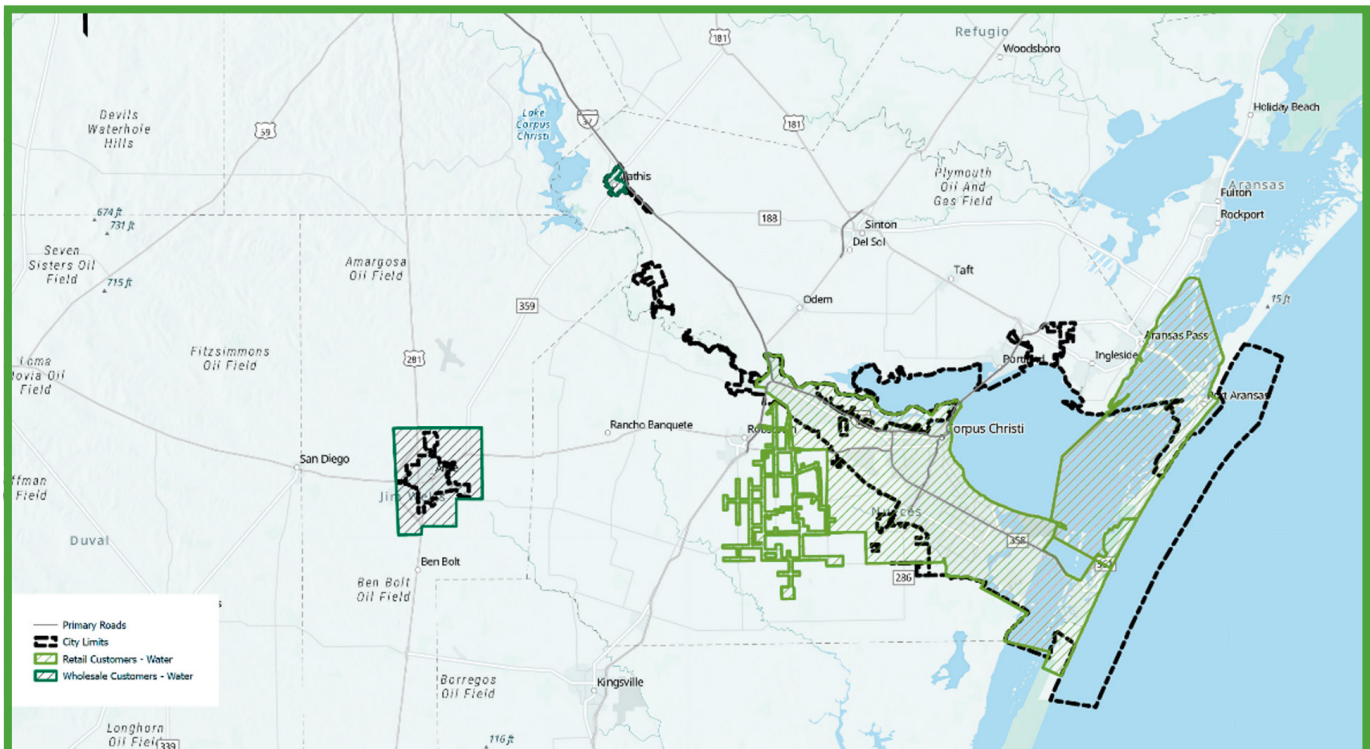


Figure 6-1: Corpus Cristi Water Service Areas

Includes retail service area and wholesale service area
*Source: Plummer Associates

6.1 Description of Water Sources

Corpus Christi Water Utilities and its regional partners are active participants in the Region N Regional Water Planning Group, which covers the Coastal Bend region of Texas, including all or parts of Aransas, Bee, Brooks, Duval, Jim Wells, Kenedy, Kleberg, Live Oak, Nueces, Refugio, and San Patricio counties.

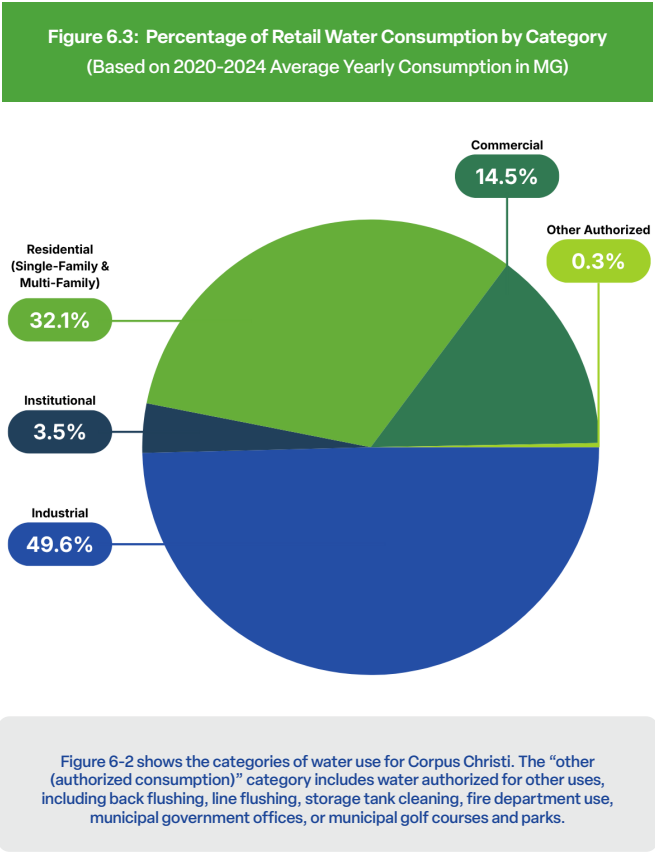
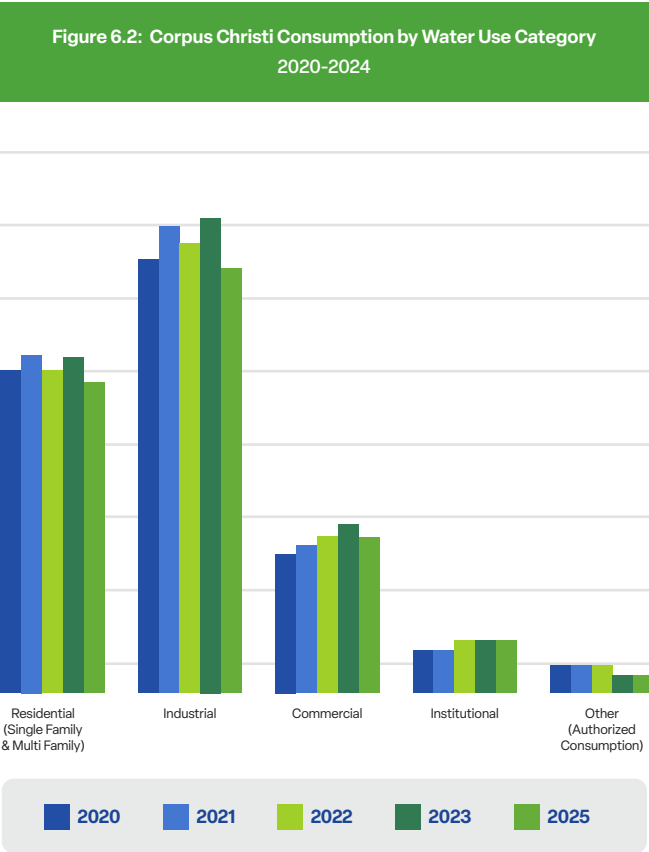
Within city limits, the City provides retail water and wastewater service to about 317,000 residents while also supplying wholesale treated and/or raw water to more than 20 regional partners, including San Patricio Municipal Water District (SPMWD), South Texas Water Authority (STWA), Nueces County WCID No. 4 (Port Aransas), and the Cities of Alice, Mathis, and Beeville. Altogether, the City provides water, directly or indirectly, to nearly half a million people across the Coastal Bend, reflecting both retail customers and wholesale deliveries to surrounding communities and industries. Figure 6-1 illustrates the combined retail and wholesale service area.

6.2 Water Treatment Capacity

The City’s regional water supply system delivers safe, reliable drinking water to more than 500,000 people across a seven-county, 140-square-mile service area through an extensive network of more than 1,800 miles of pipelines, pump stations, and storage tanks. At the center of this system is the O.N. Stevens Water Treatment Plant in Calallen, the City’s sole treatment facility, which receives raw water from Lake Corpus Christi, Choke Canyon Reservoir, Lake Texana, and the Colorado River via the Mary Rhodes Pipeline System. These sources are blended at the plant, treated to drinking water quality standards established by the Texas Commission on Environmental Quality (TCEQ), and distributed throughout the city and to wholesale customers via a network of pipelines and high-capacity pumps. The plant is currently rated for a maximum treatment capacity of 161.5 million gallons per day (MGD). Ongoing projects will increase the maximum rated capacity to 200 MGD, exceeding the City’s current peak summer demand of approximately 130 MGD.

The O.N. Stevens facility treats roughly 23 billion gallons of water each year using advanced processes such as coagulation, sedimentation, filtration, and disinfection to meet stringent state and federal standards. Supported by SCADA monitoring, system redundancy, and ongoing infrastructure upgrades, the treatment and distribution network maintains high reliability during maintenance, droughts, or emergencies. In addition to serving Corpus Christi residents, the City provides wholesale water to surrounding communities and industries, extending the benefits of its diverse, drought-resistant water supply system throughout the region.

Appendix C contains Corpus Christi’s most recent Water Utility Profiles based on the formats recommended by TCEQ for both retail suppliers and wholesale suppliers.



7.0 Specification of Water Conservation Goals



7.1 TCEQ Water Conservation Goals

TCEQ rules require the adoption of specific water conservation goals for a Water Conservation Plan. The goals for this Plan include the following:

- Maintain a 5-year moving average for total and residential per capita water use below the specified amounts in Table 7-1
- Maintain a program of universal metering and meter replacement and repair as discussed in Section 8
- Maintain the Infrastructure Leakage Index (ILI), below the specified amount in Section 8
- Maintain the level of water loss in the system below the specified amount in Table 8-3
- Raise public awareness of water conservation and encourage responsible public behavior through a public education and information program as discussed in Section 9
- Increase efficient water usage and decrease waste in lawn irrigation by enforcement of reasonable irrigation and landscape water management regulations described in Table 7-2



7.2 GPCD Goals

The 2022 State Water Plan requires each regional water planning group to establish per capita water use (GPCD) goals for municipal water users. About half of the planning groups, including Region N (Coastal Bend), selected a goal of 144 gallons per capita per day (GPCD). While the City has not yet met this target, it continues to make steady progress toward achieving the GPCD goals shown in Table 7-1 and Figure 7-1. The overall GPCD remains elevated primarily due to industrial water demand, which increases total per-capita use. Due to recent drought stages and outside watering restrictions, consumption for other users has declined. As part of the City’s Water Conservation Plan, goals are established to gradually reduce water consumption over time, based on a reduction rate of approximately 0.75 gallons per capita per day per year for the five- and ten-year planning periods.

Figure 7-1: Historic & Projected GPCD
(Total, Residential, 5-Year Average, & Target Goals)

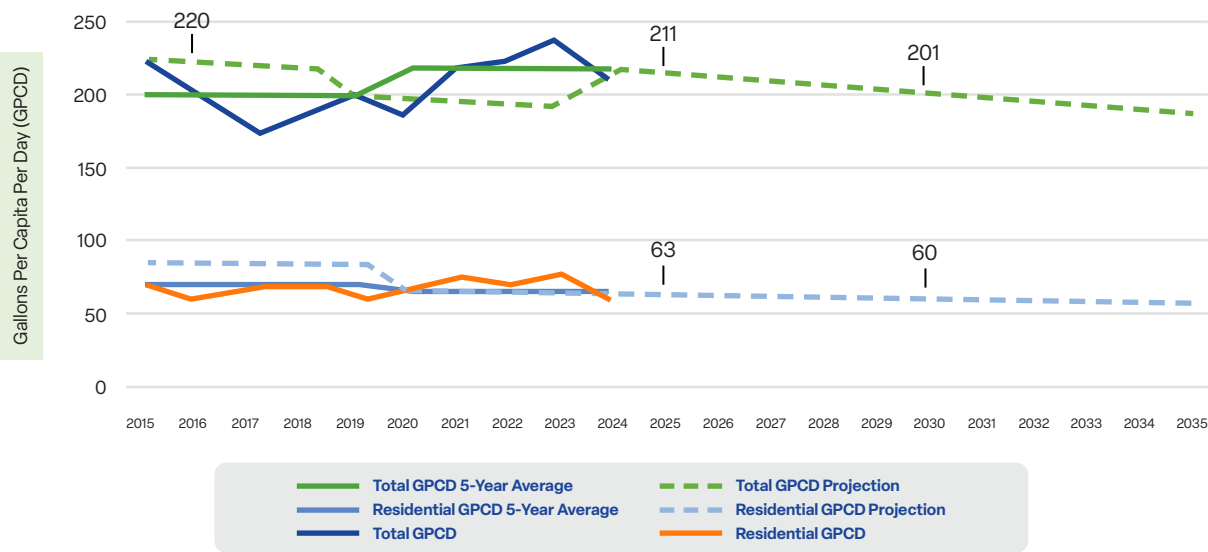


Table 7-1: GPCD Goals
(5-Year Rolling Average)

GPCD Goals (Five-Year Rolling Average)				
DESCRIPTIONS	UNITS	AVERAGE 2020-2024	2030	2035
Total GPCD ^a	GPCD	213	201	191
Residential GPCD ^b	GPCD	64	60	57

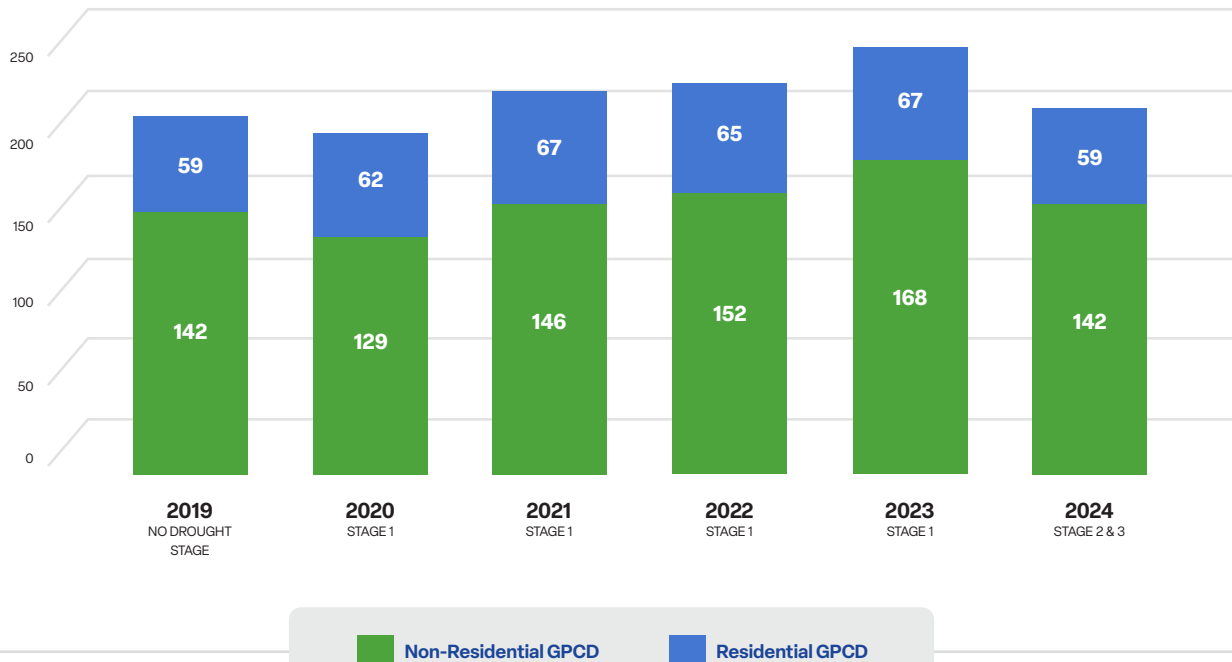
^aTotal GPCD = (Total Gallons in System ÷ Permanent Population) ÷ 365
^bResidential GPCD = (Gallons Used for Residential Use ÷ Residential Population) ÷ 365

Table 7-1 illustrates the historic and projected total and residential GPCD trends since 2020. Because weather and drought restrictions can significantly influence water use, annual consumption can vary widely. To minimize the effects of short-term weather fluctuations, the City tracks GPCD goals using a five-year rolling average, which provides a more reliable measure of long-term progress toward conservation objectives.

Drought Stage Effects on GPCD

GPCD CATEGORIES	2019 NO DROUGHT STAGE	2020 STAGE 1	2021 STAGE 1	2022 STAGE 1	2023 STAGE 1	2024 STAGE 3
Non-Residential GPCD	142	129	146	152	168	146
Residential GPCD	59	62	67	65	67	59
Total GPCD	201	191	213	217	235	205
Change in Total GPCD	0	-5.0%	6.0%	8.0%	16.9%	2.0%
Change in Non-Residential GPCD	0	-9.2%	13.2%	4.1%	10.5%	-13.1%
Change in Residential GPCD	0	5.08%	8.06%	-2.99%	3.08%	-11.94%

GPCD by Type, Year, & Drought Stage

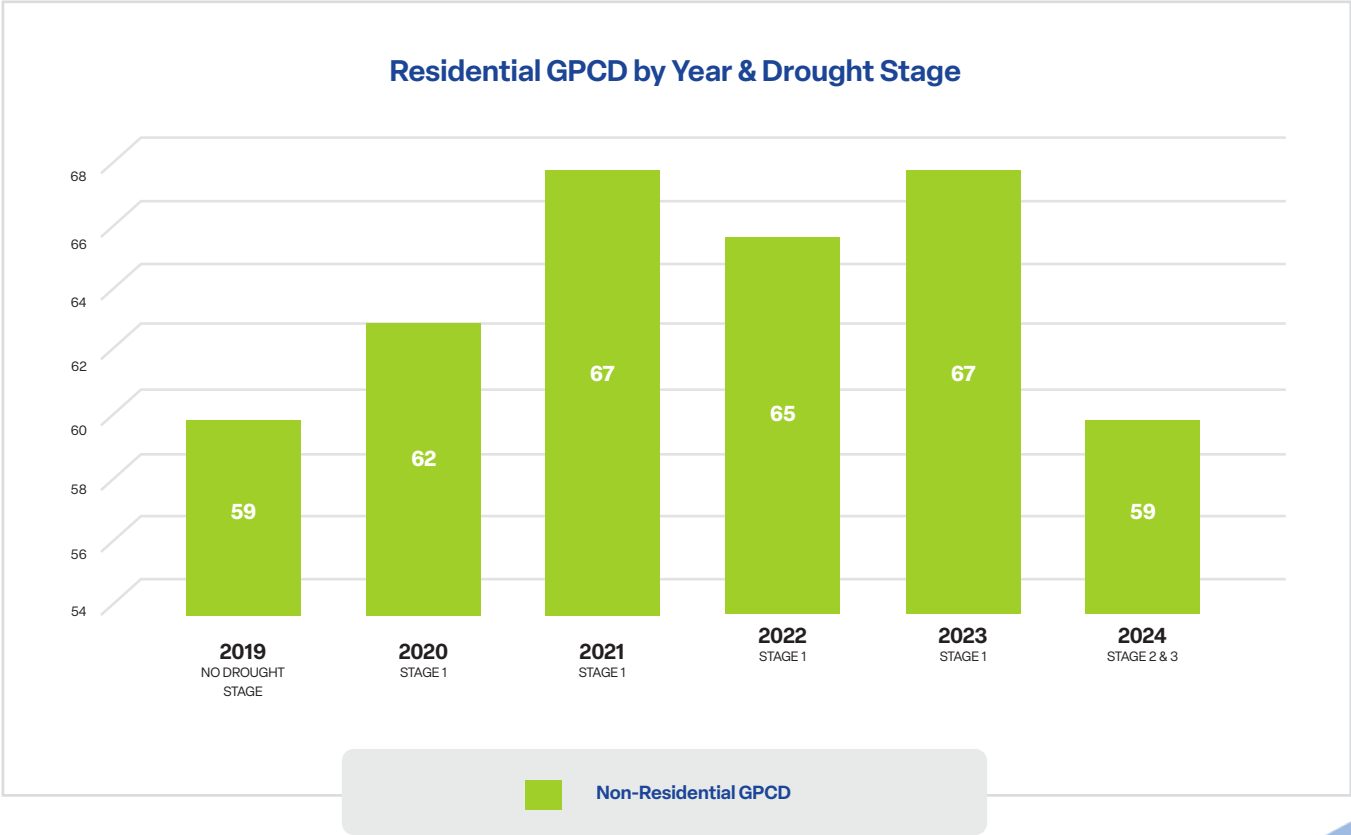


*Stage 2 was implemented on March 12, 2024. Stage 3 was implemented on December 16, 2024.





GPCD CATEGORIES	2019 NO DROUGHT STAGE	2020 STAGE 1	2021 STAGE 1	2022 STAGE 1	2023 STAGE 1	2024 STAGE 3
Residential GPCD	59	62	67	65	67	59
Change in Residential GPCD	0	5.08%	8.06%	-2.99%	3.08%	-11.94%



Stage 2 was implemented on March 12, 2024. Stage 3 was implemented on December 16, 2024.



7.3 Analysis of Best Management Practices

To update the Water Conservation Plan, the City evaluated Best Management Practices (BMPs) outlined in the TWDB's Water Conservation Best Management Practices Guide. Table 7-2 summarizes the City's implementation status, planned actions, and schedule for each applicable BMP for Municipal Water Providers and Wholesale Water Providers. The City's review focused on identifying both longstanding conservation measures and new or enhanced practices planned for implementation during this planning cycle.

Table 7-2 presents the current and planned implementation schedule for BMPs across key program areas, including municipal planning, system operations, landscaping, public education, financial incentives, conservation technology, and regulatory enforcement. The City of Corpus Christi continues to strengthen its conservation framework by incorporating a broad range of BMPs. These efforts include maintaining a Water Resource Manager fulfilling the role of Conservation Coordinator since 1988, implementing an Outdoor Watering Schedule, and sustaining public education partnerships that date back to 1992 with the Museum of Science and History's Xeriscape Learning Center. New and evolving initiatives include the Residential Leak Repair Program (in planning), graywater system implementation under the 2021 Plumbing Code, and the expansion of water reuse projects through 2025.

Corpus Christi maintains close coordination with its wholesale customers through regular meetings, updates, and individualized support. The City's Water Conservation staff are available to assist wholesale partners in developing and implementing conservation programs tailored to their local needs.

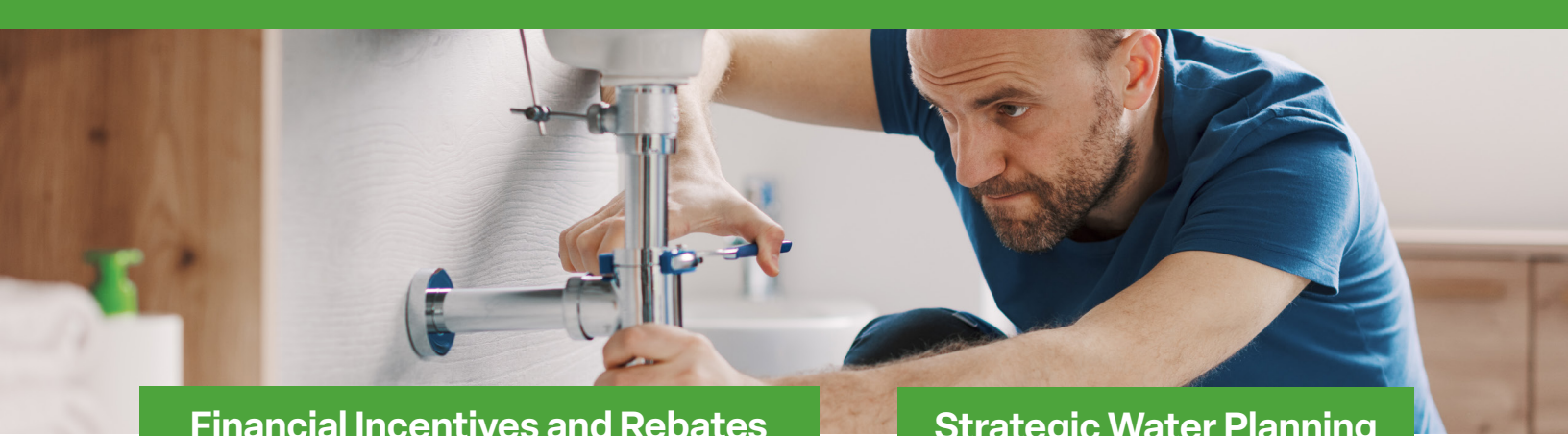
Wholesale Conservation Rates

The City is evaluating rate structures to encourage conservation while maintaining cost recovery and operational sustainability. Future consideration will be given to tiered or efficiency-based rate options for wholesale customers to reinforce regional conservation goals.

Water Conservation Education and Public Awareness

Corpus Christi operates a comprehensive conservation education and outreach program. Efforts include school-based curricula such as Learning to Be Water Wise and The Water Source Book, community programs through the Xeriscape Learning Center and Design Garden, and public information campaigns via TV, radio, print, and billboards. These programs emphasize practical, actionable steps residents can take to reduce water use. The Water Hotline (361-826-1600) continues to provide the public with free conservation kits and educational materials.





Financial Incentives and Rebates

The City offers and continues to evaluate rebate and retrofit programs that support direct customer participation, including:

- Residential Toilet Incentive Program (under consideration)
- Plumbing Assistance for Economically Disadvantaged Customers (Residential Leak Repair Program) – (in planning stage)
- Custom Conservation Rebates (under consideration)
- Showerhead, Aerator, and Toilet Flapper Retrofit Kits (active since 2020)
- Waterwise Landscape Design and Conversion Program

These efforts complement broader initiatives such as rain barrel programs, landscape irrigation evaluations, and targeted outreach to large water users.

Strategic Water Planning

Corpus Christi integrates conservation BMPs into its long-term Water Conservation and Drought Management Plans. Many of these efforts, such as system water audits, reuse projects, and landscape irrigation management, are updated periodically to align with changing state regulations, code amendments, and new conservation technologies.

Upcoming efforts include expansion of graywater reuse, completion of a residential reclaimed-water fill station (2025), and continued integration of conservation goals into city ordinances and operational policies.

Table 7-3: Water Conservation Best Management Practices Implementation Schedule						
BMP	Best Management Practice	Implementation Schedule				Notes
		Date Implemented	Code Adoption	Before 2024	Before 2029	
Municipal BMPs						
Conservation Analysis & Planning						
2.1	Conservation Coordinator	1988		✓		Duties Assigned 1988
2.2	Cost Effectiveness Analysis			✓		Ongoing
2.3	Water Survey for Single-Family & Multi-Family				✓	Develop Scope of Work & Determine Program Cost Based on Anticipated Participation Goals. This will Allow the City to Determine the Effectiveness of this Program in Terms of Dollars per Thousand Gallons Saved.
2.4	Customer Characterization: Analysis to Prioritize BMP Selection				✓	Develop Scope of Work & Determine Program Cost Based on Anticipated Participation Goals. This will Allow the City to Determine the Effectiveness of this Program in Terms of Dollars Per Thousand Gallons Saved.

Conservation Analysis & Planning					
3.2	Wholesale Agency Assistance Program			✓	Corpus Christi will Conduct Research on Similar Programs in Texas and will Meet with Wholesale Customers to Assess Their Needs.
System Operations					
4.2	Utility Water Audit & Water Loss	>2020		✓	Ongoing, Flushing Optimization/Water Quality Maintenance
Landscaping					
5.1	Athletic Field Conservation			✓	Develop Scope of Work and Determine Program Cost Based on Anticipated Participation Goals. This will Allow the City to Determine the Effectiveness of This Program in Terms of Dollars per Thousand Gallons Saved. City will Involve Landscape and Irrigation Professionals for Input When Developing and Evaluatng Potential Programs.
5.2	Golf Course Conservation	1960s		✓	On-Going. The Reuse Program Started in the Early 1960s, with the First Deliveries Going to the Gabe Lozano Golf Course; Over Time it Expanded to Other Golf Courses.
5.3	Landscape Irrigation Conservation & Incentives			✓	Develop Scope of Work and Determine Program Cost Based on Anticipated Participation Goals. This will Allow the City to Determine the Effectiveness of This Program in Terms of Dollars per Thousand Gallons Saved. City will Involve Landscape and Irrigation Professionals for Input When Developing and Evaluatng Potential Programs.
5.3a	Rain Barrel Program	2018		✓	Ongoing, Periodic Program
5.4	Park Conservation		2020	✓	2020 Water Conservation Plan Includes Several Park-Focused Measures
5.5	Residential Landscape Irrigation Evaluations			✓	Develop Scope of Work and Determine Program Cost Based on Anticipated Participation Goals. This will Allow the City to Determine the Effectiveness of This Program in Terms of Dollars per Thousand Gallons Saved. City will Involve Landscape and Irrigation Professionals for Input When Developing and Evaluatng Potential Programs.
5.6	Outdoor Watering Schedule		2001	✓	Water Resource Management Ordinance, Section 55-151 (Last Amended 2019)



Education & Public Awareness						
6.3	Landscape Irrigation Evaluation			✓	Develop Scope of Work and Determine Program Cost Based on Anticipated Participation Goals. This will Allow the City to Determine the Effectiveness of This Program in Terms of Dollars per Thousand Gallons Saved. City will Involve Landscape and Irrigation Professionals for Assistance with Public Outreach, Consultation on Use of Proper Terminology, and Input on Development and Evaluation of Potential Programs.	
6.4	Partnerships With Non-Profits	1982		✓	On-Going. 1st Partnership was in 1982 with the Museum of Science & History's Xeriscape Learning Center	
Rebates, Retrofit, Incentives Programs						
7.3	Residential Toilet Replacement Program				Corpus Christi will Conduct a Feasibility Study to Determine the Number of Toilets Already Replaced Through Corpus Christi Programs and Through Attrition Since 1994.	
7.4	Showerhead, Aerator, & Toilet Flapper	2020		✓	✓	On-Going. Corpus Christi Includes This Retrofit Activity Within its Conservation Toolkit (E.g., Water-Saving Kits and Public/School Outreach)
7.5	Waterwise Landscape Design & Conservation Program	1982		✓	✓	On-Going. The City's Landscape-Conversion Effort Has Been Active for Decades—Rooted in the Xeriscape Learning Center (Est. 1982)—and it was Explicitly Organized as §5.7.3 "Water-Wise Landscape Design & Conservation Program" in the 2020 Water Conservation Plan.
7.6	Custom Conservation Rebates				✓	Develop Scope of Work and Determine Program Cost Based on Anticipated Participation Goals. This will Allow the City to Determine the Effectiveness of This Program in Terms of Dollars per Thousand Gallons Saved.
7.7	Plumbing Assistance for Economically Disadvantaged Customers				✓	Develop Scope of Work and Determine Program Cost Based on Anticipated Participation Goals. This will Allow the City to Determine the Effectiveness of This Program in Terms of Dollars per Thousand Gallons Saved.
Rebates, Retrofit, Incentives Programs						
8.1	New Construction Graywater		2023	✓		On-Going. 2021 International Plumbing Code (with Local Amendments)—Effective August 1, 2023—Which Allows Permitted Graywater Systems When Designed/Installed per Code.

8.3	Water Reuse	1960s-2025	✓	On-Going. Irrigation Reuse (E.g., Golf Courses, Parks/Landscapes) & Other Bulk/Non-Potable Reuse have been Placed Well Before 2020. Residential Reclaimed-Water Fill Station (Non-Potable, for Yard Irrigation) Launched February 25, 2025. Corpus Christi Water has Taken Several Proactive Steps to Expand and Improve its Residential Reclaimed-Water Fill Station Program in Response to High Demand and Access Constraints. The City has Increased Availability By Extending Operating Hours, Including Adding Weekend Service, and is Evaluating Staffing Enhancements and Potential Third-Party Operations to Improve Throughput and Customer Access. In Addition, a Second Fill Station has been Developed to Reduce Wait Times and Alleviate Congestion at the Existing Site. These Efforts Build on the Initial Expansion of the Oso Wastewater Treatment Plant Facility to Provide Type I Reclaimed Water for Residential Use, Reflecting a Phased, Operationally Focused Approach to Improving Service While Longer-Term Capacity Solutions Continue to be Evaluated.
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Regulatory & Enforcement					
9.1	Prohibition on Wasting Water		2001	✓	City Ordinance, Section 55-151 (Last Amended March 2025)
9.2	Conservation Ordinance Planning & Development		2001	✓	Water Resource Management Ordinance, Section 55 (Ongoing) Corpus Christi will evaluate potential ordinance or building code enhancements intended to improve long-term water efficiency and sustainability. Areas for consideration may include water-efficient plumbing fixtures, onsite water reuse systems for large developments, and landscape design standards that reduce high-water-use turf grass areas.
9.3	Enforcement on Irrigation Standards		2001	✓	Water Resource Management Ordinance, Section 55-151 (Last Amended 2019)



8.0 Metering, Water Use Records, Control of Non-Revenue Water, Leak Detection, & Repair

One of the key elements in water conservation is careful tracking of water use and control of losses. Reducing non-revenue water is one of the few conservation programs that directly impacts rates. Programs for universal metering, meter testing, meter repair, and periodic meter replacement have been developed using American Water Works Association (AWWA) standards and are essential elements in Corpus Christi's program to control losses.

8.1 Practices to Measure & Account for the Amount of Water Delivered

Water deliveries from Lake Corpus Christi, Choke Canyon Reservoir, Lake Texana, and the Colorado River are metered by the City using meters with accuracy of at least $\pm 5\%$. Authorized agencies can access the meters at all reasonable times, and meters are calibrated to maintain the required accuracy.





8.2 Monitoring & Record Management Program for Determining Delivering, Sales, & Losses

Corpus Christi has an effective record management system in place. As required by TAC Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2 (a)(2)(B), the utility's record management system allows for the separation of water sales and uses into residential, commercial, municipal, and industrial categories. This information is included in the TCEQ-required Water Conservation Annual Report, as described in Section 7.0.

The City of Corpus Christi meters all the connections in the distribution system. The meter distribution by water use category is included in Table 8-1 below. Meters range in size from 5/8 inches to 16 inches. All meters met AWWA accuracy standards when installed. As of October 2025, there were a total of 98,169 active retail customer meters in the city.

Table 8-1: Meter Distribution

Table 8-1: Meter Distribution	
METER TYPE BY WATER USE CATEGORY	TOTAL NUMBER
Residential - Single Family	88,659
Residential - Multi Family	1,737
Industrial/Mining	18
Commercial	6,758
Institutional	986
Other/Wholesale	11
TOTAL	98,169

Metering is a critical aspect in water conservation. It provides a method for customers to relate their water usage to their utility bill. For the City, meters help keep track of water use to target areas of inefficiency or locate areas where there may be potential leaks. New technology allows the City to track water use remotely and alert employees when there are spikes in water use among customers.



The following elements are part of the City's ongoing metering program:

- Required metering of all connections
- A policy for the installation of adequate, properly sized meters as determined by a customer's current water use patterns
- Direct utility metering of each duplex, triplex, and four-plex unit, whether each is on its own separate lot or there are multiple buildings on a single commercial lot
- Metering of all utility and publicly owned facilities
- Use of construction meters and access keys to account for water used in new construction
- Implementation of the State requirements in HB 2404, passed by the 77th Legislature Regular Session and implemented through Texas Water Code 13.502, which requires all new apartments be either directly metered by the utility or sub-metered by the owner
- Regular replacement of 5/8" and 3/4" meters after 15 years of service
- An accounting of water savings and revenue gains through the implementation of the Water Utilities Department's meter repair and replacement procedures

Each year, the City estimates annual water savings achieved through its meter repair and replacement program. These savings are determined by using a statistical sample of meters analyzed as part of the ongoing replacement effort.

The City follows a meter replacement policy that prioritizes action when a customer reports potential meter inaccuracies. Records of all replaced meters are maintained in the City's Maximo asset management software. In most cases, meter replacement is preferred over repair due to the higher cost and lower reliability of repairing older meters. The City has improved operational efficiency and reduced water loss by phasing out aging meters and converting standard units to automated meter reading (AMR) technology. Within this system, AMR refers specifically to meters capable of automatically transmitting meter reads, while advanced metering infrastructure (AMI) refers to the broader system infrastructure that supports data collection, communication, and billing operations. The AMR system remotely records consumption data and automatically integrates it into the billing process, enhancing accuracy and reducing manual labor costs. Currently, approximately 99 percent of the City's meters are equipped with AMR technology, resulting in more reliable readings and improved water accountability.

The meter replacement program is implemented in coordination with the City's AMI deployment, as further described in Section 10.5.

8.3 Leak Detection, Repair, & Water Loss Accounting

A system water audit is used annually to monitor the total amount of non-revenue water. Many variables influence revenue and nonrevenue components of the utility’s water system, including meter inaccuracy, data discrepancies, unauthorized consumption, reported breaks and leaks, and unreported losses.

Since the TWDB approved the initial water loss thresholds in 2014, the American Water Works Association (AWWA) Water Loss Control Committee has developed updated water loss performance indicators based on standardized AWWA water audits, and more recent, quality-controlled statewide audit data is now available to inform revisions to the thresholds. New thresholds were developed using statewide water loss audit data from 2015 to 2020 and reflect industry-accepted metrics that better distinguish between apparent and real water loss. In particular, the revised approach emphasizes real loss performance indicators—such as gallons per connection per day and the Infrastructure Leakage Index (ILI)—rather than percent water loss, which can be misleading and does not adequately reflect system leakage or operational conditions. The thresholds are based on service connection density rather than population to align with current industry standards. These water loss threshold values address concerns with utilities that experience high volumes of real water loss and ensure that water loss mitigation is considered as an effective strategy for utilities receiving financial assistance for drinking water projects. The thresholds apply only to retail public utilities requesting financial assistance from the TWDB for a water supply project and are used to evaluate applications received after July 1, 2023.

The City uses gallons per capita per day (GPCD) as its primary metric for tracking water loss. In the 2020 Plan, the City reported a water loss of 15 GPCD, with targets of 13 GPCD by 2024 and 12 GPCD by 2029 (Table 8-2). For 2024, the actual water loss was 19 GPCD, while the five-year average (2020–2024) was 16 GPCD. Updated goals for the current planning period are presented in Table 8-3. These goals are considered conservative, as the City’s average water loss percentage from 2020 to 2024 was 7.5%, well below the 10–12% benchmark range commonly used in urban Texas Regional Water Plans.

The Infrastructure Leakage Index (ILI) measures how efficiently a water system manages real (physical) losses by comparing existing leakage to the theoretically lowest possible leakage. Each city’s ILI is unique and depends on factors such as system pressure, the distance from curb stops to meters, and the number of service connections per mile of main. In 2024, the City’s Unavoidable Annual Real Losses (UARL) were estimated at 1.5 million gallons per day, representing the minimum leakage achievable with current infrastructure and service density. The utility’s adjusted ILI of approximately 2.07 places it among the most efficient systems in the United States. An ILI below 3.0 is considered highly efficient, and the goals outlined in this Plan aim to maintain that level of performance over the long term.

Table 8-2: Previous Water Loss (2020 Plan)				
Description	Units	2019	2024	2029
Adjusted Water Loss GPCD	GPCD	15	13	12

Water Loss GPCD = (Total Water Loss ÷ Permanent Population) ÷ 365

Table 8-3: Previous Water Loss (2025 Plan)

Description	Units	Average (2020-2024)	2030	2035
Adjusted Water Loss GPCD	GPCD	16	15	15

$$\text{Water Loss GPCD} = (\text{Total Water Loss} \div \text{Permanent Population}) \div 365$$

The City maintains a dedicated team of employees committed to identifying and repairing leaks throughout the water distribution system. A crew of round-the-clock responders follow established procedures to promptly locate and repair leaks, minimizing water loss and service disruptions:

- 1 The initial responder, called a first responder, is sent to the location to identify and mark the priority of the leak. Response time can be 30 minutes to an hour.
- 2 On-site crews may need to close valves to isolate the leaking line. Line locates are called in to mark all other utility lines in the area of the leak prior to repairs. Depending on the severity of the leak, these locates can take up to approx. 24 hours.
- 3 After line locates are complete, distribution leak crews respond to the leak and make all needed repairs.
- 4 After repairs are complete, the dirt and dressing crews back fill the area and replace grass as needed.



9.0 Other Required Conservation Measures

9.1 Public Education & Information

The City is committed to keeping our community informed, inspired, and engaged in protecting our most precious resource: water. Through a wide range of media platforms and communication channels, we deliver clear, consistent, and compelling messages that highlight the importance of water conservation and efficiency.

Our public information program aims to educate and empower customers by raising awareness of the region's water resources and encouraging everyday actions that promote sustainability. In addition to ongoing education and outreach, the department uses these communication tools to share timely updates during critical events such as drought conditions or water-related emergencies.

Each year, the department publishes and mails the Consumer Confidence Report to every customer, ensuring transparency and trust. This report, also available online for easy access by all residents, including new customers, provides detailed information on local water quality, system performance, and conservation resources to help customers make informed decisions about their water use.

Public school education programs play a vital role in promoting water conservation. These programs not only strengthen local conservation efforts and enhance the utility's community image but also support Texas state education goals by helping students learn about the importance of protecting our water resources. When students share what they learn about water sources and conservation with their families, they can inspire real changes in household habits, leading to meaningful water savings both now and in the future.

Corpus Christi offers various educational programs to all grade levels throughout the City. These programs include:

Learning to be Water Wise

This program is used in 5th-grade classrooms to connect science, math, language arts, and social studies with water conservation activities. Boxed kits, which include a toilet water displacement bag, toilet leak detector tablets, showerhead and faucet aerators, and instructions for repairing common toilet leaks, are given to each student.

Water Source Book

The Water Source Book, developed by the Water Environment Federation, reinforces water resource issues with 26 hands-on classroom activities and experiments for grades 6 through 8. The classroom activities feature water, wastewater, and stormwater experiments. This book is provided by the City to all local school resource libraries. Continuing education workshops introduce local classroom teachers to the Water Source Book. Teachers can utilize this teaching aid to satisfy certain TEKS objectives as established by the Texas Education Agency.

Coastal Bend Teacher Resource

The City sponsors events, which brings environmental resources to teachers throughout the Texas Education Agency Region 2 area. The City also participates in annual events, offering valuable opportunities and resources for teachers, students, and the general public.

Xeriscape Learning Center and Design

Adjacent to the Corpus Christi Museum of Science and History, The City has an educational gazebo targeted to children, featuring various showcases and an 8-foot interactive topographic map of the Nueces River Basin. The touch of a button activates lights and sound to explain the area's water resources. Displays throughout the Xeriscape Learning Center and Design Garden are used as teaching tools for children and adults.

Other Educational Materials

The City keeps a stock of Splash Activity Book, My Book About Water and How to Use it Wisely, and The Story of Drinking Water. Spanish material is also available upon request.

The City continues to offer the programs mentioned above, being sure to stay up-to-date on any changing information related to water. They also continue to stay connected to local schools to identify any new potential opportunities. To keep track of the impact of these various programs, Corpus Christi records:

- The number of presentations made
- The number and type of curricula materials developed and/or provided
- The number and percentage of students reached by presentations and by curriculum
- Annual budget related to conservation



9.1.1 Public Information

The City employs several types of media resources and modes of mass communication to present a compelling and consistent message about the importance of conservation and water use efficiency. The overall goal of the public information program is to raise awareness among customers of the regional water resources and the importance of conservation. The public information is also used to convey urgent messages, such as those about drought or emergencies. Each year, Corpus Christi mails a Consumer Confidence Report to every customer. This report is available online to anyone including new customers. It explains water quality and provides details to customers where they can get more information on water conservation.

The Water Utilities Department employs the following methods to raise water resources awareness and to instill the importance of conservation in the community:

Multi-Tiered Media Campaign

Annual television, radio, and print campaigns promoting water use efficiency. Agreements with radio and television stations provide for matching airtime for each ad purchased by the City.

Billboard Advertisement

Ads on billboards, bus benches, and other public spaces are used to promote water conservation and water quality.

Website

The department's Water Conservation website includes tips on outdoor and indoor conservation, Xeriscape landscaping, irrigation regulations, and educational materials for youth.

Printed Brochures

The City provides the public with printed brochures on various topics ranging from Xeriscaping to indoor water conservation. They are produced by several entities, including the Water Utilities Department, the TWDB, and Texas A&M AgriLife Extension, and are available at multiple City locations and programs.

City Call Center & Request Line

The City's Call Center (361-826-CITY) was created to encourage customers to report water line breaks and to request service calls. Customers may also utilize a dedicated Water Hotline number (361 826-1600) to request water conservation kits and other information.

Water conservation staff implemented or enhanced public education activities for the last five-years are summarized in Table 9-1.



Table 9-1: Public Education and Information Summary*

Type	2020		2021		2022		2023		2024	
	No.	Reach	No.	Reach	No.	Reach	No.	Reach	No.	Reach
Brochures	-	-	-	-	-	-	25	25,000	25	10,000
Message Provided on Utility Bills	-	-	-	-	-	-	14	98,000	12	200,000
Press Releases	-	-	-	-	2	10,000	4	150,000	27	200,000
TV/Radio PSAs	-	-	630	100,000	720	85,000	0	0	1,400	210,000
Radio Public Service Announcements	-	-	630	100,000	720	85,000	300	300,000	1,342	210,000
Educational School Programs	-	-	-	-	-	-	4	300	4	300
Displays, Seminars, Presentations	-	-	-	-	0	0	12	240	1	30
Community Events	-	-	-	-	1	150	6	300	6	300
Social Media (Facebook)	-	-	60	50,000	70	40,000	86	221,304	25	64,332
Social Media (X, formerly Twitter)	-	-	60	50,000	70	40,000	86	125,800	25	37,000
Social Media (Instagram)	-	-	-	-	-	-	-	-	-	-
Social Media (YouTube)	-	-	-	-	-	-	-	-	-	-
Facility Tours	-	-	-	-	-	-	3	60	3	60

9.2 Water Rate Structure

The City has conservation-oriented water rate structures in place. The current rate structure consists of the following five classes: Residential, Commercial, Large Volume, Irrigation, and Raw Water.

Each customer is first charged a flat rate based on meter size as outlined in Table 9-2. Usage charges are then assessed according to customer class as shown in Table 9-3 to Table 9-8. The rate structures for all customer classes are designed to encourage water conservation, and an increasing block rate structure is in place for residential and irrigation classes to reduce peak usage. The City analyzes each customer class and sets rates in proportion to those classes which place the most demands upon the water system. The rates shown in the tables are effective January 1, 2026, and are subject to change as the utility continues to refine its rate structures to improve impact on water conservation and manage cost of service most effectively.

Table 9-2: Minimum Monthly Charge (For First 2,000 Gallons)

Meter Size	Service Charge (inside city limits)	Service Charge (outside city limits)
5/8" X 3/4" - Residential	\$17.25	\$15.95
5/8" X 3/4" - Commercial	\$17.25	\$15.95
1"	\$43.13	\$39.87
1 1/2"	\$86.25	\$79.73
2"	\$138.00	\$127.56
3"	\$258.75	\$239.17
4"	\$431.25	\$398.61
6"	\$948.75	\$876.93
8"	\$1,552.50	\$1,434.98
10"	\$2,587.50	\$2,391.63
16"	\$2,587.50	\$2,391.63

**Table 9-3: Residential Monthly Volume Charges Per 1,000 Gallons
(Above The Minimum Level)**

Monthly Volume	Inside City Limits	Outside City Limits
First 2,000	\$0.75	\$0.75
Next 4,000	\$4.06	\$4.06
Next 9,000	\$7.11	\$7.11
Next 10,000	\$11.17	\$11.17
Over 25,000	\$16.24	\$16.24

Table 9-4: Commercial Water Rates Per 1,000 Gallons

Monthly Volume	Inside City Limits	Outside City Limits
First 2,000	\$0.75	\$0.75
Over 2,000	\$4.06	\$4.06

Table 9-5: Large Volume

Monthly Volume	Inside City Limits	Outside City Limits
First 10,000,000	\$45,500.00	\$45,500.00
Over 10,000,000 (per 1,000)	\$4.34	\$4.34

**Table 9-6: Residential & Commercial Irrigation Water Rates
(Water on Separate Meter)**

Monthly Volume	Inside City Limits	Outside City Limits
Per 1,000 Gallons	\$11.17	\$11.17

Table 9-7: Agency for Resale

	Metered at Site of Treatment	Water Delivered Through City Facilities
Per 1,000 Gallons	\$1.80	\$2.55

Table 9-8: Monthly Charge for Raw Water per 1,000 Gallons

Raw Water Rate Payers ICL and OCL	Raw Water Non-Rate Payers	Raw Water Agency for Resale
\$1.18	\$1.36	\$1.33

9.3 Reservoir System Operation

The City relies primarily on a surface-water network built around the Lake Corpus Christi and Choke Canyon Reservoir system (within the Nueces River Basin) to serve hundreds of thousands of people in the region. These reservoirs supply raw water that is treated and delivered for residential, commercial, industrial, and municipal uses.

This reservoir system is managed under a multi-phase operational structure designed to ensure reliable supply, maintain water quality, accommodate recreation, and satisfy downstream ecological/regulatory flow requirements.

9.4 Implementation & Enforcement

The City completes the TCEQ required Water Conservation Annual Report by May 1 of each year. The report includes various water conservation strategies that have been implemented, including the date of implementation. Additionally, the report includes progress made on the five- and ten-year per capita water use goals from this Plan. If the goals are not being met, Corpus Christi Water documents why not. The amount of water saved is also documented in this report.

9.5 Requirement for Water Conservation Plans by Wholesale Customers

The City serves four wholesale customers with treated water and seven wholesale customers with raw water. As part of the Water Conservation Planning Process, it is important to keep customers informed of the City's decision-making processes. This chapter explains the conservation goals that the City encourages its wholesale customers to adopt.

Although wholesale customers outside of the city limits are not legally bound by the ordinances of Corpus Christi, the City requires wholesale customers to adopt conservation measures outlined in the Plan. It helps to ensure the region's water security and also ensures that customers, both inside and outside the City, are treated equitably. This Section explains the contractual requirements between the City and its wholesale customers.

Each of Corpus Christi's wholesale customers with 3,300 connections is responsible to develop, implement, and update water conservation plans or conservation measures using the applicable requirements of TCEQ Water Conservation Plans, Drought Contingency & Emergency Water Management Plans, Guidelines and Requirements, and Texas Administrative Code 30 TAC Chapter 288(a)(2)(C).

The best way to reduce water waste and increase conservation is to set targets and goals. As mentioned in Section 7.2, the City has adopted a water conservation goal of achieving a one percent annual reduction in total water consumption. This target corresponds to a projected residential GPCD of 57 and a total system GPCD of 191 by the year 2035. The City, though it has no authority to require it, suggests to each of its wholesale customers to achieve a one percent annual reduction in consumption. The Coastal Bend Regional Water Planning Group recommends consumption reductions as shown below in Table 9-9. The GPCD of wholesale customers is shown with 5- and 10-year consumption goals. Though the group's targets are not as aggressive as the City's, they still help in conserving the region's water supplies.





Table 9-9: Wholesale Customer GPCD Targets

Wholesale Customer	Baseline	5-Year Goal	10-Year Goal
	162	145	141
Beeville Water Supply District	139	190	188
Nueces County WCID 4 (Port Aransas)	407	581	550
San Patricio Municipal Water District	407	134	*

* Note: Not Available

Each wholesale customer is asked to provide a copy of their Water Conservation Plan and required Water System Audit (as required by the TWDB water audit reporting requirement as specified by House Bill 3338) to Corpus Christi Water. This will be required in any new contracts developed with wholesale customers as specified in 30 TAC Chapter 288.

In 2000, Corpus Christi Water's wholesale customers accounted for slightly over one quarter of the raw water pumped. By 2023, wholesale customers accounted for more than one third of the raw water pumped. As needed, the City will hold meetings with their wholesale customers to provide information on the utility's program and conservation best management practices.

9.6 Coordination with Regional Water Planning Groups

Corpus Christi Water works with the Coastal Bend Regional Water Planning Group (Region N) to help develop the water conservation plan documents. This Plan is consistent with Regional Water Planning Group and their methodology and structure. Letters documenting that a copy of the Water Conservation Plan was sent to the Co-Chairs of the TWDB Region N Water Planning Groups and are attached in Appendix D.

10.0 Additional Conservation Efforts

10.1 Our Water Resources

The City's plumbing code is based on the 2021 International Code Council (ICC) standards with local amendments. The City has adopted the International Plumbing Code, which includes regulations for the design, construction, and maintenance of plumbing systems to ensure safety and compliance with public health standards. For more detailed information, you can refer to the official city website or the ICC's resources, with the following language to be consistent with the 1.28-gallon toilet requirement of the Texas Health and Safety Code, Title 5, Subtitle B, Chapter 372, effective January 1, 2014.

*IPC Section 604.4.1; added to read as follows: 604.4.1 State maximum flow rate. Where the State mandated maximum flow rate is more restrictive than those of this section, the State flow rate shall take precedence.

10.2 Reuse

Reclaimed water by definition is "domestic or municipal wastewater which has been treated to a quality suitable for a beneficial use, pursuant to the provisions of this chapter and other applicable rules and permits" (30 TAC §210.3(24)). The City currently has five reclaimed water use customers and recognizes that the direct use of reclaimed water is an effective method of reducing potable water usage. Corpus Christi reclaimed water is used primarily for irrigating recreational tracts.

Historically, the City began its reuse program in the early 1960s when it began delivering reclaimed effluent to its first customer, the Gabe Lozano Golf Course. Over the next several decades, the City acquired additional reuse customers which include other golf courses, parks, and recreational areas.

In 2024, the City supplied 4,100,000 gallons of reclaimed water to approximately 1,200 customers, saving 100% of the amount in potable water. To facilitate future expansion of its reuse program, the City will identify and rank industrial, commercial, and institutional (ICI) customers according to volume of water use and investigate the feasibility of using reclaimed water. The City will also investigate reuse opportunities within its own accounts or with third parties outside its service area. The City owns several public areas that are candidates for reuse.





10.3 Landscape Water Management

Ordinance §55-151 establishes time-of-day restrictions to promote efficient water use and reduce waste. Under this regulation, landscape watering using sprinklers or irrigation systems is not allowed between 10:00 a.m. and 6:00 p.m., when evaporation rates are highest. However, residents may still water by hand or use drip irrigation during these hours, and brief system operation is permitted for maintenance or repair. These measures are intended to conserve water resources and encourage more responsible outdoor watering practices.

Exceptions to these restrictions are covered under the declared drought stages as included in the most up-to-date version of the Corpus Christi Drought Contingency Plan, adopted under this same ordinance.

10.4 Prohibition on Wasting Water

Under the Prohibition on Wasting Water Conservation Measure, it is unlawful to waste water. Actions leading to the wasting of water are prohibited and will be enforced. No person shall:

- 1 Allow water to run off property into gutters or streets.
- 2 Permit or maintain defective plumbing in a home, business establishment, or any location where water is used on the premises. Defective plumbing includes out-of-repair water closets, underground leaks, defective or leaking faucets, and taps.
- 3 Allow water to flow constantly through a tap, hydrant, valve, or otherwise by any use of water connected to the City water system.
- 4 Use any non-recycling decorative water fountain.
- 5 Allow irrigation heads or sprinklers to spray directly on paved surfaces such as driveways, parking lots, and sidewalks in public right-of-ways;
- 6 Operate an irrigation system at water pressure higher than recommended, causing heads to mist, or to operate with broken heads.





10.5 Advanced Metering Infrastructure

AMI unlocks the benefits of leveraging granular water consumption data and empowers utilities to:

- 1 Minimize water loss and unbilled consumption by responding swiftly to indicators of leaks, main breaks, and meter tampering
- 2 Foster greater operational transparency and efficiency
- 3 Optimize resource allocation and streamline workflows
- 4 Enhance customer service through user-friendly digital platforms
- 5 Provide insights for customers to understand and manage their water usage
- 6 Facilitate targeted conservation efforts and programs

Corpus Christi currently utilizes a fixed-network AMR system that enables remote meter data collection across the utility system. As the City continues to modernize its metering infrastructure, it is transitioning toward broader AMI capabilities and the advanced communications and data management functions associated with AMI systems.

Installation & Deployment

The City rolled out a fixed-network AMR system covering approximately 146,000 meters for water. Because meters are read automatically rather than walking or drive-by meter readers, utility-staff time and access issues (yards locked, pets, etc.) are significantly reduced. Also, a study of the pilot system showed expected savings of about US \$32 million over 20 years (about US \$1.6 million/year) from the AMR implementation. Additionally, the City separated out savings and cost-avoidance by removing the need for monthly manual reads.



Key Benefits

Improved Accuracy & Billing

With AMR, the City gets regular, automated readings (for example twice daily readings in the pilot) which improves data accuracy and reduces the number of estimated bills, re-reads, and customer disputes.

Better data also means better detection of anomalies (e.g., unexpectedly high usage, leaks). The City has converted ~99 % of its water meters to AMR, enabling improved meter accuracy and reduced manual reading cost.

Enhanced Customer Service/Usage Visibility

Because the system can deliver more frequent data, customers (and the utility) have more timely insight into consumption trends, enabling earlier detection of problems (e.g., leaks, unusual usage) and opportunities for conservation. For example, in pilot descriptions, the City noted the ability to “give a direct call ... if somebody is using an inordinate amount of water.” This transparency also builds trust in utility billing and service reliability (fewer surprises).

Water Conservation/System Efficiency

Because AMR enables more accurate and frequent meter data, the utility is better able to monitor and manage water usage, detect leaks or inefficiencies, and reduce losses. Benefits also include better demand management, faster outage or leak detection, and improved asset management.

Foundational Infrastructure for Other Applications

In the case of the City, the AMR deployment served as the launch-pad for a broader wireless mesh/city-wide WiFi/smart infrastructure investment. For example, the AMR system led to deployment of a wireless network covering 147 square miles, enabling other municipal applications (public safety, mobile field workers, building inspection, etc). In other words: the meter-reading network becomes a multi-use backbone, not just for utilities.



**Sending
Leak Alerts**



**Improving Billing
Transparency**



**Providing Detailed
Usage Data**

10.6 Rainwater Harvesting

The City has developed a rainwater harvesting program that allows Water Utilities customers to purchase rain barrels and capture rainfall for reuse. These systems collect water from rooftops and store it for uses such as irrigation, helping reduce demand on potable water and manage stormwater runoff. For those interested in getting started, the Texas Water Development Board provides the Texas Manual on Rainwater Harvesting, a practical guide covering system design, components, water quality, costs, and maintenance best practices for residential and small-scale commercial applications.

11.0 Potential Conservation Programs

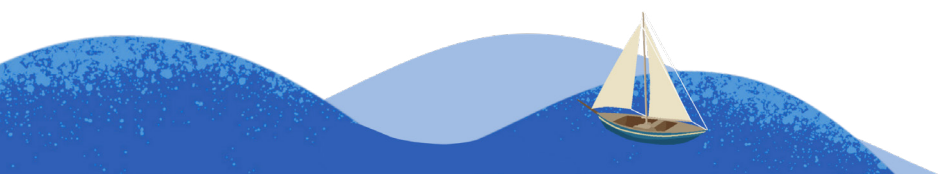
11.1 Customer Characterization

One of the newer BMPs is Customer Characterization, the practice of analyzing a utility's customer data trends towards the purpose of realizing targeted water savings. Undertaking a Customer Characterization allows the utility to better understand how water is used within its service area, to recognize the differences between various subsets within its customer base, and to facilitate positive experiences between the utility and the customer that inform both parties of their respective values and familiarize high water users with ways to reduce their usage.

Just as the motivations for deploying an AMI program will be different across utilities, each utility's purpose for embarking on Customer Characterization will be different, and the analysis should be crafted with their specific goal(s) in mind. Customer Characterization is one of the most effective tools for tailoring a utility-wide conservation program, because it yields actionable insight and stimulates community conversation.

11.2 Plumbing Assistance Programs for Economically Disadvantaged Customers

Plumbing assistance programs help both utilities and customers by conserving water and lowering household bills. These programs are most effective when targeted toward economically disadvantaged homeowners, who often struggle to afford plumbing repairs or replace inefficient fixtures. By funding or performing repairs for leaks and replacing high-flow toilets and showerheads, utilities can help customers reduce their water use and bills while improving payment reliability. At the same time, the utility benefits from overall water conservation and reduced system demand. The success of such programs depends on identifying and engaging a sufficiently large group of qualifying customers who will benefit from and participate in the assistance offered.



11.3 Conservation Programs for Industrial, Commercial, & Institutional

This BMP is intended for all Municipal Water User Groups (“utility”) which serve industrial, commercial, and institutional (“ICI”) customers. Conservation programs for ICI accounts are essential for increasing water efficiency among ICI users. For many utilities, consumption in the ICI sector is a significant proportion of total consumption, and average water use by ICI customers is higher than average water use by residential customers. In these circumstances, significant overall reductions in water demand can be more rapidly achieved by developing a Conservation Program for ICI Accounts.

11.3.1 Identify ICI Accounts

Identify and rank commercial, industrial, and institutional accounts (or customers if the agency chooses to aggregate accounts) according to water use and highest conservation potential. For purposes of this BMP, ICI accounts are defined as follows:

Commercial Accounts: any water user that provides or distributes a product or service, such as hotels, restaurants, office buildings, commercial businesses or other places of commerce. These do not include multi-family residences, agricultural users, or customers that fall within the industrial or institutional classifications.

Industrial Accounts: any water users that are primarily manufacturers or processors of materials as defined by the Standard Industrial Classifications (SIC) Code numbers 2000 through 3999 or the North American Industry Classification System.

Institutional Accounts: any water-using establishment dedicated to public service. This includes schools, courts, churches, hospitals, and government facilities. All facilities serving these functions are to be considered institutions regardless of ownership.

11.3.2 ICI Customer Incentive Programs & Water-Use Surveys

Implement an ICI and Customer Incentives Program. Develop a customer targeting and marketing strategy to provide customer incentives to ICI accounts such that each ICI sector’s average annual water demand, after considering growth in demand that may occur from new ICI customers, is reduced 10 percent within 10 years of the date implementation is to commence. Directly contact (via letter, telephone, or personal visit) and offer water use surveys and customer incentives to at least 10 percent of each ICI sector on a recurring basis.

Financial incentives can be offered on a dollar amount per piece of equipment retrofitted such as toilets, clothes washers, or cooling tower conductivity meters. Another option for determining the amount of potential incentives is offering an open-ended incentive per gallon per day saved so that facility managers propose the projects. This approach places utility staff in the role of evaluating such proposals.

For utilities which choose to offer water-use surveys, the surveys include a site visit, an evaluation of all water-using apparatus and processes, a customer report identifying recommended efficiency measures with their expected payback period, and available agency incentives. The Industrial Water Audit BMP can provide good guidance for development of the survey.

11.4 Irrigation & Landscape Ordinance Review

To reinforce water conservation goals, it is imperative to review and strengthen irrigation and landscape ordinances, as well as outdoor water use practices among all customers. Actively involving landscape and irrigation professionals in this process is critical, as their expertise ensures that regulations are practical, effective, and aligned with current industry standards and technologies. By instituting firmer guidelines, leveraging AMI data, and collaborating with these professionals, the City can more effectively manage, monitor, and optimize water usage. Reviewing and updating irrigation and landscape ordinances in partnership with industry experts will promote the adoption of water-efficient irrigation systems, support comprehensive evaluations to identify leaks and inefficiencies, and improve detection of remote ordinance violations. Additionally, engaging landscape and irrigation professionals in educational events for residents and businesses will enhance outreach efforts, encourage best practices, and further reduce reliance on outdated or inefficient irrigation methods.

Review of ordinances may include but is not limited to:

- Review of the existing ordinances for alignment with the goals of this Plan;
- Utilization of AMR/AMI consumption data for possible violation detection;
- Identification of new high-efficiency landscape fixtures;
- Benchmarking of the current ordinance with ordinances from other cities promoting water conservation;
- Identification of drought tolerant turf, groundcover, shrubs, and trees that are allowed to be planted at new homes;
- Integrating landscape ordinances and other outdoor conservation strategies into land use planning;
- Providing opportunity for feedback from interested parties and citizens; and
- Homeowner support for turf reduction within homeowners' associations (HOA).

11.5 Irrigation Design Criteria

As part of the requirement that all new irrigation systems comply with state design and installation regulations (Texas Administrative Code Title 30, Chapter 344), the City reviews irrigation design during development reviews. The reviews verify that the landscape design meets state and City standards.



12.0 Adoption of Water Conservation Plan, Periodic Review, & Update of Plan

Opportunity for public comment on the plan was provided at the City of Corpus Christi Council (Council) meeting on _____. Appendix G contains a copy of the resolution from the [Date] Council meeting at which this Plan was adopted.

TCEQ requires that water conservation plans be reviewed and, if necessary, updated every five years to coincide with the regional water planning process. This Plan will be updated as required and will be continually reassessed for opportunities to improve water efficiency and conservation based on new or updated information.



Appendix A - List of References

List Of References

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Appendix B - Texas Commission on Environmental Quality Rules on Municipal Water Conservation Plans



Texas Commission on Environmental Quality Rules On Municipal Water Conservation Plans

TITLE 30 ENVIRONMENTAL QUALITY

PART 1 TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

CHAPTER 288 WATER CONSERVATION PLANS, DROUGHT

CONTINGENCY

PLANS, GUIDELINES AND REQUIREMENTS

SUBCHAPTER A WATER CONSERVATION PLANS

RULE §288.1 Definitions

The following words and terms, when used in this chapter, shall have the following meanings, unless the context clearly indicates otherwise.

(1) Agricultural or Agriculture--Any of the following activities:

- (A) cultivating the soil to produce crops for human food, animal feed, or planting seed or to produce fibers;
- (B) the practice of floriculture, viticulture, silviculture, and horticulture, including the cultivation of plants in containers or non-soil media by a nursery grower;
- (C) raising, feeding, or keeping animals for breeding purposes or for the production of food or fiber, leather, pelts, or other tangible products having a commercial value;
- (D) raising or keeping equine animals;
- (E) wildlife management; and
- (F) planting cover crops, including cover crops cultivated for transplantation, or leaving land idle for the purpose of participating in any governmental program or normal crop or livestock rotation procedure.

(2) Agricultural use--Any use or activity involving agriculture, including irrigation.

(3) Best management practices--Voluntary efficiency measures that save a quantifiable amount of water, either directly or indirectly, and that can be implemented within a specific period.

(4) Conservation--Those practices, techniques, and technologies that reduce the consumption of water, reduce the loss or waste of water, improve the efficiency in the use of water, or increase the recycling and reuse of water so that a water supply is made available for future or alternative uses.

(5) Commercial use--The use of water by a place of business, such as a hotel, restaurant, or office building. This does not include multi-family residences or agricultural, industrial, or institutional users.

(6) Drought contingency plan--A strategy or combination of strategies for temporary supply and demand management responses to temporary and potentially recurring water supply shortages and other water supply emergencies. A drought contingency plan may be a separate document identified as such or may be contained within another water management document(s).

- (8) Institutional use--The use of water by an establishment dedicated to public service, such as a school, university, church, hospital, nursing home, prison, or government facility. All facilities dedicated to public service are considered institutional regardless of ownership.
- (9) Irrigation--The agricultural use of water for the irrigation of crops, trees, and pastureland, including, but not limited to, golf courses and parks which do not receive water from a public water supplier.
- (10) Irrigation water use efficiency--The percentage of that amount of irrigation water which is beneficially used by agriculture crops or other vegetation relative to the amount of water diverted from the source(s) of supply. Beneficial uses of water for irrigation purposes include, but are not limited to, evapotranspiration needs for vegetative maintenance and growth, salinity management, and leaching requirements associated with irrigation.
- (11) Mining use--The use of water for mining processes including hydraulic use, drilling, washing sand and gravel, and oil field re-pressuring.
- (12) Municipal use--The use of potable water provided by a public water supplier as well as the use of sewage effluent for residential, commercial, industrial, agricultural, institutional, and wholesale uses.
- (13) Nursery grower--A person engaged in the practice of floriculture, viticulture, silviculture, and horticulture, including the cultivation of plants in containers or nonsoil media, who grows more than 50% of the products that the person either sells or leases, regardless of the variety sold, leased, or grown. For the purpose of this definition, grow means the actual cultivation or propagation of the product beyond the mere holding or maintaining of the item prior to sale or lease, and typically includes activities associated with the production or multiplying of stock such as the development of new plants from cuttings, grafts, plugs, or seedlings.
- (14) Pollution--The alteration of the physical, thermal, chemical, or biological quality of, or the contamination of, any water in the state that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property, or to the public health, safety, or welfare, or impairs the usefulness or the public enjoyment of the water for any lawful or reasonable purpose.
- (15) Public water supplier--An individual or entity that supplies water to the public for human consumption.
- (16) Regional water planning group--A group established by the Texas Water Development Board to prepare a regional water plan under Texas Water Code, §16.053.
- (17) Residential gallons per capita per day--The total gallons sold for residential use by a public water supplier divided by the residential population served and then divided by the number of days in the year.
- (18) Residential use--The use of water that is billed to single and multi-family residences, which applies to indoor and outdoor uses.
- (19) Retail public water supplier--An individual or entity that for compensation supplies water to the public for human consumption. The term does not include an individual or entity that supplies water to itself or its employees or tenants when that water is not resold to or used by others.
- (20) Reuse--The authorized use for one or more beneficial purposes of use of water that remains unconsumed after the water is used for the original purpose of use and before that water is either disposed of or discharged or otherwise allowed to flow into a watercourse, lake, or other body of state-owned water.
- (21) Total use--The volume of raw or potable water provided by a public water supplier to billed customer sectors or nonrevenue uses and the volume lost during conveyance, treatment, or transmission of that water.
- (22) Total gallons per capita per day (GPCD)--The total amount of water diverted and/or pumped for potable use divided by the total permanent population divided by the days of the year. Diversion

volumes of reuse as defined in this chapter shall be credited against total diversion volumes for the purposes of calculating GPCD for targets and goals.

(23) Water conservation coordinator--The person designated by a retail public water supplier that is responsible for implementing a water conservation plan.

(24) Water conservation plan--A strategy or combination of strategies for reducing the volume of water withdrawn from a water supply source, for reducing the loss or waste of water, for maintaining or improving the efficiency in the use of water, for increasing the recycling and reuse of water, and for preventing the pollution of water. A water conservation plan may be a separate document identified as such or may be contained within another water management document(s).

(25) Wholesale public water supplier--An individual or entity that for compensation supplies water to another for resale to the public for human consumption. The term does not include an individual or entity that supplies water to itself or its employees or tenants as an incident of that employee service or tenancy when that water is not resold to or used by others, or an individual or entity that conveys water to another individual or entity, but does not own the right to the water which is conveyed, whether or not for a delivery fee.

(26) Wholesale use--Water sold from one entity or public water supplier to other retail water purveyors for resale to individual customers.

Source Note: The provisions of this §288.1 adopted to be effective May 3, 1993, 18 TexReg 2558; amended to be effective February 21, 1999, 24 TexReg 949; amended to be effective April 27, 2000, 25 TexReg 3544; amended to be effective August 15, 2002, 27 TexReg 7146; amended to be effective October 7, 2004, 29 TexReg 9384; amended to be effective January 10, 2008, 33 TexReg 193; amended to be effective December 6, 2012, 37 TexReg 9515; amended to be effective August 16, 2018, 43 TexReg 5218

TITLE 30

ENVIRONMENTAL QUALITY

PART 1

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY CHAPTER 288

WATER CONSERVATION PLANS, DROUGHT CONTINGENCY

PLANS, GUIDELINES AND REQUIREMENTS

SUBCHAPTER A

WATER CONSERVATION PLANS

RULE §288.2

Water Conservation Plans for Municipal Uses by Public Water Suppliers

- (a) A water conservation plan for municipal water use by public water suppliers must provide information in response to the following. If the plan does not provide information for each requirement, the public water supplier shall include in the plan an explanation of why the requirement is not applicable.

(1) Minimum requirements. All water conservation plans for municipal uses by public water suppliers must include the following elements:

(A) a utility profile in accordance with the Texas Water Use Methodology, including, but not limited to, information regarding population and customer data, water use data (including total gallons per capita per day (GPCD) and residential GPCD), water supply system data, and wastewater system data;

(B) a record management system which allows for the classification of water sales and uses into the most detailed level of water use data currently available to it, including, if possible, the sectors listed in clauses (i) - (vi) of this subparagraph. Any new billing system purchased by a public water supplier must be capable of reporting detailed water use data as described in clauses (i) - (vi) of this subparagraph:

- (i) residential;
- (I) single family;
- (II) multi-family;
- (ii) commercial;
- (iii) institutional;
- (iv) industrial;
- (v) agricultural; and,
- (vi) wholesale.

(C) specific, quantified five-year and ten-year targets for water savings to include goals for water loss programs and goals for municipal use in total GPCD and residential GPCD. The goals established by a public water supplier under this subparagraph are not enforceable;

(D) metering device(s), within an accuracy of plus or minus 5.0% in order to measure and account for the amount of water diverted from the source of supply;

(E) a program for universal metering of both customer and public uses of water, for meter testing and repair, and for periodic meter replacement;

(F) measures to determine and control water loss (for example, periodic visual inspections along distribution lines; annual or monthly audit of the water system to determine illegal connections; abandoned services; etc.);

(G) a program of continuing public education and information regarding water conservation;

(H) a water rate structure which is not "promotional," i.e., a rate structure which is cost-

based and which does not encourage the excessive use of water;

(I) a reservoir systems operations plan, if applicable, providing for the coordinated operation of reservoirs owned by the applicant within a common watershed or river basin in order to optimize available water supplies; and

(J) a means of implementation and enforcement which shall be evidenced by:

- (i) a copy of the ordinance, resolution, or tariff indicating official adoption of the water conservation plan by the water supplier; and
- (ii) a description of the authority by which the water supplier will implement and enforce the conservation plan; and

(K) documentation of coordination with the regional water planning groups for the service area of the public water supplier in order to ensure consistency with the appropriate approved regional water plans.

(2) Additional content requirements. Water conservation plans for municipal uses by public drinking water suppliers serving a current population of 5,000 or more and/or a projected population of 5,000 or more within the next ten years subsequent to the effective date of the plan must include the following elements:

(A) a program of leak detection, repair, and water loss accounting for the water transmission, delivery, and distribution system;

(B) a requirement in every wholesale water supply contract entered into or renewed after official adoption of the plan (by either ordinance, resolution, or tariff), and including any contract extension, that each successive wholesale customer develop and implement a water conservation plan or water conservation measures using the applicable elements in this chapter. If the customer intends to resell the water, the contract between the initial supplier and customer must provide that the contract for the resale of the water must have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures in accordance with the provisions of this chapter.

(3) Additional conservation strategies. Any combination of the following strategies shall be selected by the water supplier, in addition to the minimum requirements in paragraphs (1) and (2) of this subsection, if they are necessary to achieve the stated water conservation goals of the plan. The commission may require that any of the following strategies be implemented by the water supplier if the commission determines that the strategy is necessary to achieve the goals of the water conservation plan:

(A) conservation-oriented water rates and water rate structures such as uniform or increasing block rate schedules, and/or seasonal rates, but not flat rate or decreasing block rates;

(B) adoption of ordinances, plumbing codes, and/or rules requiring water-conserving plumbing fixtures to be installed in new structures and existing structures undergoing substantial modification or addition;

(C) a program for the replacement or retrofit of water-conserving plumbing fixtures in existing structures;

(D) reuse and/or recycling of wastewater and/or graywater;

(E) a program for pressure control and/or reduction in the distribution system and/or for customer connections;

(F) a program and/or ordinance(s) for landscape water management;

(G) a method for monitoring the effectiveness and efficiency of the water conservation plan; and

(H) any other water conservation practice, method, or technique which the water supplier

shows to be appropriate for achieving the stated goal or goals of the water conservation plan.

(b) A water conservation plan prepared in accordance with 31 TAC §363.15 (relating to Required Water Conservation Plan) of the Texas Water Development Board and substantially meeting the requirements of this section and other applicable commission rules may be submitted to meet application requirements in accordance with a memorandum of understanding between the commission and the Texas Water Development Board.

(c) A public water supplier for municipal use shall review and update its water conservation plan, as appropriate, based on an assessment of previous five-year and ten-year targets and any other new or updated information. The public water supplier for municipal use shall review and update the next revision of its water conservation plan every five years to coincide with the regional water planning group.

Source Note: The provisions of this §288.2 adopted to be effective May 3, 1993, 18 TexReg 2558; amended to be effective February 21, 1999, 24 TexReg 949; amended to be effective April 27, 2000, 25 TexReg 3544; amended to be effective October 7, 2004, 29 TexReg 9384; amended to be effective December 6, 2012, 37 TexReg 9515

TITLE 30 ENVIRONMENTAL QUALITY

PART 1 TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

CHAPTER 288 WATER CONSERVATION PLANS, DROUGHT CONTINGENCY

PLANS, GUIDELINES AND REQUIREMENTS

SUBCHAPTER A WATER CONSERVATION PLANS

RULE §288.5 Water Conservation Plans for Wholesale Water Suppliers

A water conservation plan for a wholesale water supplier must provide information in response to each of the following paragraphs. If the plan does not provide information for each requirement, the wholesale water supplier shall include in the plan an explanation of why the requirement is not applicable.

(1) Minimum requirements. All water conservation plans for wholesale water suppliers must include the following elements:

- (A) a description of the wholesaler's service area, including population and customer data, water use data, water supply system data, and wastewater data;
- (B) specific, quantified five-year and ten-year targets for water savings including, where appropriate, target goals for municipal use in gallons per capita per day for the wholesaler's service area, maximum acceptable water loss, and the basis for the development of these goals. The goals established by wholesale water suppliers under this subparagraph are not enforceable;
- (C) a description as to which practice(s) and/or device(s) will be utilized to measure and account for the amount of water diverted from the source(s) of supply;
- (D) a monitoring and record management program for determining water deliveries, sales, and losses;
- (E) a program of metering and leak detection and repair for the wholesaler's water storage, delivery, and distribution system;
- (F) a requirement in every water supply contract entered into or renewed after official adoption of the water conservation plan, and including any contract extension, that each successive wholesale customer develop and implement a water conservation plan or water conservation measures using the applicable elements of this chapter. If the customer intends to resell the water, then the contract between the initial supplier and customer must provide that the contract for the resale of the water must have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures in accordance with applicable provisions of this chapter;
- (G) a reservoir systems operations plan, if applicable, providing for the coordinated operation of reservoirs owned by the applicant within a common watershed or river basin. The reservoir systems operations plans shall include optimization of water supplies as one of the significant goals of the plan;
- (H) a means for implementation and enforcement, which shall be evidenced by a copy of the ordinance, rule, resolution, or tariff, indicating official adoption of the water conservation plan by the water supplier; and a description of the authority by which the

water supplier will implement and enforce the conservation plan; and
(l) documentation of coordination with the regional water planning groups for the service area of the wholesale water supplier in order to ensure consistency with the appropriate approved regional water plans.

(2) Additional conservation strategies. Any combination of the following strategies shall be selected by the water wholesaler, in addition to the minimum requirements of paragraph (1) of this section, if they are necessary in order to achieve the stated water conservation goals of the plan. The commission may require by commission order that any of the following strategies be implemented by the water supplier if the commission determines that the strategies are necessary in order for the conservation plan to be achieved:

- (A) conservation-oriented water rates and water rate structures such as uniform or increasing block rate schedules, and/or seasonal rates, but not flat rate or decreasing block rates;
- (B) a program to assist agricultural customers in the development of conservation pollution prevention and abatement plans;
- (C) a program for reuse and/or recycling of wastewater and/or graywater; and
- (D) any other water conservation practice, method, or technique which the wholesaler shows to be appropriate for achieving the stated goal or goals of the water conservation plan.

(3) Review and update requirements. The wholesale water supplier shall review and update its water conservation plan, as appropriate, based on an assessment of previous five-year and ten-year targets and any other new or updated information. A wholesale water supplier shall review and update the next revision of its water conservation plan every five years to coincide with the regional water planning group.

Source Note: The provisions of this §288.5 adopted to be effective May 3, 1993, 18 TexReg 2558; amended to be effective February 21, 1999, 24 TexReg 949; amended to be effective April 27, 2000, 25 TexReg 3544; amended to be effective October 7, 2004, 29 TexReg 9384; amended to be effective December 6, 2012, 37 TexReg 9515

Appendix C - City of Corpus Christi Utility Profile Based on TCEQ Format





Texas Commission on Environmental Quality

Water Availability Division

MC-160, P.O. Box 13087 Austin, Texas 78711-3087

Telephone (512) 239-4600, FAX (512) 239-2214

Utility Profile and Water Conservation Plan Requirements for Municipal Water Use by Retail Public Water Suppliers

This form is provided to assist retail public water suppliers in water conservation plan assistance in completing this form or in developing your plan, please contact the Conservation staff of the Resource Protection Team in the Water Availability Division at (512) 239-4600.

Water users can find best management practices (BMPs) at the Texas Water Development Board's website <http://www.twdb.texas.gov/conservation/BMPs/index.asp>. The practices are broken out into sectors such as Agriculture, Commercial and Institutional, Industrial, Municipal and Wholesale. BMPs are voluntary measures that water users use to develop the required components of Title 30, Texas Administrative Code, Chapter 288. BMPs can also be implemented in addition to the rule requirements to achieve water conservation goals.

Contact Information

Name of Water Supplier: City of Corpus Christi

Address: 2726 Holly Rd, Corpus Christi, TX 78415

Telephone Number: (361) 826-1826 Fax: ()

Water Right No.(s): 1947, 2345, 2464, 3214, 5434, 5655, 5736, 13675, 13676, 14124

Regional Water Planning Group: Regional Water Planning Group N

Water Conservation Coordinator (or person responsible for implementing conservation program): Esteban Ramos Phone: (361) 826-3294

Form Completed by: Esteban Ramos

Title: Water Resource Manager

Signature: _____ Date: / / _____

A water conservation plan for municipal use by retail public water suppliers must include the following requirements (as detailed in 30 TAC Section 288.2). If the plan does not provide information for each requirement, you must include in the plan an explanation of why the requirement is not applicable.

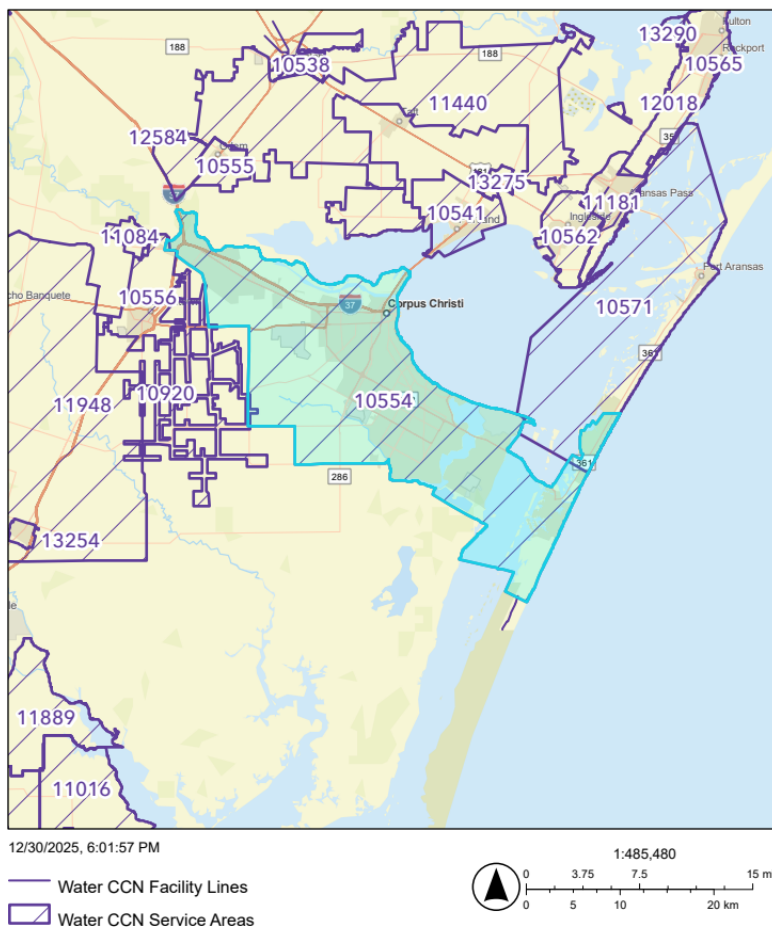
Utility Profile

I. POPULATION AND CUSTOMER DATA

A. Population and Service Area Data

1. Attach a copy of your service-area map and, if applicable, a copy of your Certificate of Convenience and Necessity (CCN).

Corpus Christ- CCN 10554



2. Service area size (in square miles): 22.2
(Please attach a copy of service-area map)
3. Current population of service area: 317,742
4. Current population served for:
 - a. Water 317,742
 - b. Wastewater 470,00

5. Population served for previous five years:

<i>Year</i>	<i>Population</i>
2024	317,742
2023	314,204
2022	317,863
2021	327,673
2020	326,000

6. Projected population for service area in the following decades:

<i>Year</i>	<i>Population</i>
2030	313,373
2040	318,911
2050	319,214
2060	317,292
2070	315,382

7. List source or method for the calculation of current and projected population size.

**Source: Draft 2026 Coastal Bend Regional Water Plan | October 2025
Population and Water Demand Projections [31 TAC §357.31]**

[2026 Regional Water Plans | Texas Water Development Board](#)

B. Customer Data

Senate Bill 181 requires that uniform consistent methodologies for calculating water use and conservation be developed and available to retail water providers and certain other water use sectors as a guide for preparation of water use reports, water conservation plans, and reports on water conservation efforts. A water system must provide the most detailed level of customer and water use data available to it, however, any new billing system purchased must be capable of reporting data for each of the sectors listed below. More guidance can be found at: <http://www.twdb.texas.gov/conservation/doc/SB181Guidance.pdf>

1. Quantified 5-year and 10-year goals for water savings:

	<i>Historic 5- year Average</i>	<i>Baseline</i>	<i>5-year goal for year 2025</i>	<i>10-year goal for year 2035</i>
Total GPCD	213	191	201	191
Residential GPCD	64	62	60	57
Water Loss GPCD	16	17	15	15
Water Loss Percentage	7.5%	8.5%	7%	7%

Notes:

Total GPCD = (Total Gallons in System ÷ Permanent Population) ÷ 365

Residential GPCD = (Gallons Used for Residential Use ÷ Residential Population) ÷ 365

Water Loss GPCD = (Total Water Loss ÷ Permanent Population) ÷ 365

Water Loss Percentage = (Total Water Loss ÷ Total Gallons in System) x 100; or (Water Loss GPCD ÷ Total GPCD) x 100

2. Current number of active connections. Check whether multi-family service is counted as
☒ Residential or ☐ Commercial?

<i>Treated Water Users</i>	<i>Metered</i>	<i>Non-Metered</i>	<i>Totals</i>
Residential	91,470	0	91,470
Single-Family	89,686	0	89,686
Multi-Family	1,784	0	1,784
Commercial	6,887	0	6,887
Industrial/Mining	20	0	20
Institutional	1,028	0	1,028
Agriculture	0	0	0
Other/Wholesale	11	0	11

3. List the number of new connections per year for most recent three years.

<i>Year</i>	<i>2022</i>	<i>2023</i>	<i>2024</i>
<i>Treated Water Users</i>	707	65	1,417
Residential	668	56	1,417
Single-Family	669	871	651
Multi-Family	-1	-815	766
Commercial	32	0	-33
Industrial/Mining	-6	0	0
Institutional	13	9	33
Agriculture	0	0	0
Other/Wholesale	0	0	0

4. List of annual water use for the five highest volume customers.

<i>Customer</i>	<i>Use (1,000 gal/year)</i>	<i>Treated or Raw Water</i>
Valero (West Plant)	1,397,389,000.00	Treated
Flint Hills Resources	1,360,700,000.00	Treated
LyondellBasell	1,355,063,000.00	Treated
Citgo	1,138,882,000.00	Treated
Valero (East Plant)	706,241,000.00	Treated

II. WATER USE DATA FOR SERVICE AREA

A. Water Accounting Data

1. List the amount of water use for the previous five years (in 1,000 gallons).

Indicate whether this is ☒ diverted or ☒ treated water.

<i>Year</i>	2020	2021	2022	2023	2024
<i>Month</i>					
January	2,512,244.00	2,767,778.39	3,127,843.75	3,295,982.87	3,499,965.60
February	2,343,891.00	2,551,087.48	2,828,060.83	2,750,508.29	2,791,194.67
March	2,758,541.00	2,909,197.73	3,424,042.31	3,435,121.24	3,065,606.21
April	2,425,019.00	2,886,062.31	3,464,447.83	2,908,220.18	3,256,554.90
May	2,806,602.00	2,823,498.92	3,658,655.03	3,487,909.10	3,608,799.83
June	2,770,302.00	3,012,492.50	3,955,831.14	3,914,448.06	3,336,950.26
July	2,802,544.00	2,921,580.07	4,333,492.45	4,182,949.29	3,587,293.66
August	3,265,364.00	3,270,892.34	3,814,085.96	4,520,530.92	3,793,813.42
September	2,591,214.00	3,107,640.99	3,152,608.43	4,056,844.95	3,598,373.40
October	3,427,088.00	2,836,858.81	3,314,230.52	3,762,927.35	3,497,144.63
November	3,350,226.00	2,851,847.95	2,690,551.71	3,326,612.86	3,239,284.80
December	3,645,927.00	3,062,673.55	3,029,762.60	3,619,227.06	3,359,849.66
Totals	34,698,962.00	35,001,611.02	40,793,612.54	43,261,282.16	40,634,831.04

2. Describe how the above figures were determined (e.g, from a master meter located at the point of a diversion from the source or located at a point where raw water enters the treatment plant, or from water sales).

Master meters at point of diversion

3. Amount of water (in 1,000 gallons) delivered/sold as recorded by the following account types for the past five years.

<i>Year</i>	2020	2021	2022	2023	2024
<i>Account Types</i>					
Residential	<u>7,439,070</u>	<u>8,017,726</u>	<u>7,526,000</u>	<u>7,693,000</u>	<u>6,910,269</u>
Single-Family	<u>6,013,530</u>	<u>5,723,642</u>	<u>5,971,000</u>	<u>6,026,000</u>	<u>5,279,397</u>
Multi-Family	<u>1,425,540</u>	<u>2,294,084</u>	<u>1,555,000</u>	<u>1,667,000</u>	<u>1,630,872</u>
Commercial	<u>3,140,037</u>	<u>3,273,853</u>	<u>3,364,000</u>	<u>3,829,000</u>	<u>3,292,682</u>
Industrial/Mining	<u>11,192,854</u>	<u>12,096,031</u>	<u>11,500,000</u>	<u>12,443,000</u>	<u>10,771,318</u>
Institutional	<u>717,169</u>	<u>677,565</u>	<u>908,000</u>	<u>931,000</u>	<u>884,354</u>
Agriculture	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Other/Wholesale	<u>14,471,523</u>	<u>10,186,505</u>	<u>27,739,111</u>	<u>28,405,249</u>	<u>28,768,892</u>

4. List the previous records for water loss for the past five years (the difference between water diverted or treated and water delivered or sold).

<i>Year</i>	<i>Amount (gallons)</i>	<i>Percent %</i>
<u>2020</u>	<u>1,861,946,951</u>	<u>8.2</u>
<u>2021</u>	<u>1,389,995,797</u>	<u>5.4</u>
<u>2022</u>	<u>1,727,027,086</u>	<u>6.9</u>
<u>2023</u>	<u>1,980,503,072</u>	<u>7.3</u>
<u>2024</u>	<u>2,370,798,432</u>	<u>9.8</u>

B. Projected Water Demands

1. If applicable, attach or cite projected water supply demands from the applicable Regional Water Planning Group for the next ten years using information such as population trends, historical water use, and economic growth in the service area over the next ten years and any additional water supply requirements from such growth.



City/County	Historical			Projections ¹					
	2000	2010	2020	2030	2040	2050	2060	2070	2080
County-Other	684	765	1,273	639	614	605	619	632	643
Live Oak County	1,990	1,649	2,437	1,631	1,575	1,538	1,528	1,516	1,508
Three Rivers	--	--	--	12	12	11	10	9	9
County-Other	135	156	183	61	56	54	50	46	42
McMullen County	135	156	183	73	68	65	60	55	51
Bishop	459	467	364	550	558	558	555	551	547
Corpus Christi	55,629	40,514	31,565	59,084	59,885	59,942	59,581	59,223	58,866
Driscoll	97	96	75	80	81	81	81	80	80
Nueces WSC		685	534	986	997	999	997	994	992
River Acres WSC ²	314	442	344	315	319	320	318	316	313
County-Other	5,214	3,347	2,608	2,607	2,639	2,641	2,625	2,609	2,593
Corpus Christi Naval Air Station	--	675	526	2,078	2,111	2,112	2,105	2,096	2,086
Nueces County WCID 3 ²	--	4,460	3,475	3,452	3,504	3,507	3,485	3,463	3,441
Nueces County WCID 4	--	2,648	2,063	1,370	1,391	1,392	1,384	1,374	1,365
Violet WSC	--	246	192	228	229	230	228	227	225
Nueces County	61,725	53,581	41,746	70,750	71,714	71,782	71,359	70,933	70,508
Aranas Pass (P)	1,210	724	1,132	1,185	1,180	1,183	1,191	1,199	1,207
Gregory	249	176	275	270	260	257	262	266	270
Ingleside	873	582	910	986	1,008	1,022	1,021	1,020	1,019
Mathis	671	534	835	469	419	400	417	434	451
Odem	319	276	431	432	423	421	426	431	437
Portland	1,976	1,503	2,349	3,555	3,837	4,155	4,500	4,873	5,277
Rincon WSC	--	351	549	378	396	405	402	399	396
Sinton	1,036	825	1,289	1,073	1,051	1,045	1,058	1,071	1,084
Taft	559	317	495	337	323	318	324	330	336
County-Other	1,980	4,513	7,053	1,664	1,785	1,683	1,310	915	493
San Patricio County	8,873	9,802	15,318	10,349	10,682	10,889	10,911	10,938	10,970
Total for Region	98,573	90,620	83,775	107,817	109,080	109,273	108,888	108,541	108,259

Note: (P) Partial

¹ Projections from Texas Water Development Board

² These entities rely on supplies delivered by Nueces County WCID 3. Nueces County WCID 3 diverts water from the Lower Nueces River and conveys supplies through an unlined canal. By lining the canals, the amount of water necessary for diversion by Nueces County WCID 3 to meet customer needs could be reduced.

III. WATER SUPPLY SYSTEM DATA

A. Water Supply Sources

1. List all current water supply sources and the amounts authorized (in acre feet) with each.

<i>Water Type</i>	<i>Source</i>	<i>Amount Authorized</i>
Surface Water	<u>Multiple Sources - See Below</u>	<u>830,668</u>
Groundwater	<u>0</u>	<u>0</u>
Other	<u>0</u>	<u>0</u>

WR Number	WR Type	Source	Acre Feet
1947	Water Supply Contract (WSC)	Lavaca Basin	41,840
2345	Water Supply Contract (WSC)	Lavaca Basin	4,500
2464	Certificate of Adjudication (ADJ)	Nueces Basin	304,898
3214	Certificate of Adjudication (ADJ)	Nueces Basin	139,000
5434	Certificate of Adjudication (ADJ)	Colorado Basin	35,000
5655	Water Right Permit (WRPERM)	Nueces-Rio Grande Basin	67.2
5736	Water Right Permit (WRPERM)	Nueces Basin	8,000
13675	Water Right Permit (WRPERM)	San Antonio-Nueces Basin	186,295
13676	Water Right Permit (WRPERM)	Nueces-Rio Grande Basin	93,148
14124	Water Right Permit (WRPERM)	Nueces Basin	17,920

B. Treatment and Distribution System (if providing treated water)

1. Design daily capacity of system (MGD): 161.5
2. Storage capacity (MGD):
 - a. Elevated 10 MGD
 - b. Ground 27.5 MGD
3. If surface water, do you recycle filter backwash to the head of the plant?
☒ Yes ☐ No If yes, approximate amount (MGD): 2-5% of treated water flow. Current effective output is 159 MGD, making filter backwash between 3.2 and 8 MGD.

The O.N. Stevens Water Treatment Plant uses a wash-water recycle pond (Lagoon-7) where filter backwash water is sent for solids to settle. After settling, the decanted backwash water is pumped back to the head of the plant using the existing wash-water return pump station. It is estimated that spent filter backwash volumes are 2-5% of treated water flow.

IV. WASTEWATER SYSTEM DATA

A. Wastewater System Data (if applicable)

1. Design capacity of wastewater treatment plant(s) (MGD): **42,700,000**
2. Treated effluent is used for ☐ on-site irrigation, ☒ off-site irrigation, for ☐ plant wash-down, and/or for ☐ chlorination/dechlorination.

If yes, approximate amount (in gallons per month): **488,239**

3. Briefly describe the wastewater system(s) of the area serviced by the water utility. Describe how treated wastewater is disposed. Where applicable, identify treatment plant(s) with the TCEQ name and number, the operator, owner, and the receiving stream if wastewater is discharged.

a. Overview of the Corpus Christi Wastewater System

Corpus Christi Water (CCW) operates an extensive municipal wastewater system that collects, transports, treats, and either discharges or reuses wastewater from homes, businesses, and industrial users throughout the city. The system serves a population of roughly 324,000 residents across about 137 square miles of municipal service area.

b. Key components include:

- **Sanitary sewer collection network** — more than 1,200 miles of gravity sewer mains interwoven with approximately 100 lift stations that move wastewater uphill and toward treatment plants.

- **Six wastewater treatment plants (WWTPs or WRPs)** strategically located through the city to treat flows before discharge or reuse.
- **Pretreatment and inspection programs** to regulate industrial dischargers and food establishments to protect plant processes.
- **Reclaimed water distribution services** that allow some treated effluent to be reused in irrigation and industrial uses.

Together, the plants typically treat an average of ~28 million gallons of wastewater per day and have a combined capacity of around 42–43 million gallons per day.

c. Wastewater Collection System

Wastewater from toilets, sinks, showers, and commercial / industrial processes enters the sewer network via local sewer lines. The collection system moves flows by gravity where possible, and by lift stations where needed to overcome terrain differences.

Components:

- **Gravity Mains:** Over 1,200 miles of underground sewer pipe.
- **Lift Stations:** Around 100 pump/lift stations that move wastewater to higher elevations for continued transport.
- **Maintenance:** Repair crews respond to thousands of service calls annually, including cleaning sewer main lines and maintaining manholes.

d. Wastewater Treatment Plants (WWTPs & WRPs)

Corpus Christi operates six treatment facilities, each serving different areas of the city's sewer network.

- **Oso Water Reclamation Plant (WRP)** — the largest facility, handling roughly half of the city's wastewater. Recent upgrades are underway to modernize treatment basins and expand capacity. The Oso Water Reclamation Plant (WRP) is located in Corpus Christi, Texas, and is part of the Texas Commission on Environmental Quality (TCEQ). The plant is currently permitted under TPDES Permit No. WQ0010401004, which allows for the discharge of treated wastewater at a volume not to exceed 24 million gallons per day directly to Blind Oso Bay. The plant is undergoing improvements to enhance its treatment capacity and infrastructure, which is part of the city's capital improvement plan.
- **Allison Wastewater Treatment Plant** — The Allison Wastewater Treatment Plant (Allison WWTP) is a municipal wastewater treatment facility operated by the City of Corpus Christi in the northwest portion of the city, located at 4101 Allison Drive in Nueces County, Texas. It serves a portion of the city's wastewater system (part of the Allison Sewershed) and is one of several treatment plants managed by the city's wastewater division. The plant is currently permitted under Wastewater Permit WQ0010401006 and has a capacity of 5 million gallons per day. Treated effluent is discharged into the Nueces River tidal segment and eventually flows toward Nueces Bay. This discharge point is part of a TPDES (Texas Pollutant Discharge Elimination System) permit that governs effluent limits to protect water quality.

- **New Broadway Wastewater Treatment Plant** — The New Broadway Wastewater Treatment Plant is a municipal wastewater treatment facility operated by the City of Corpus Christi. As one of the city's treatment plants, New Broadway WWTP handles wastewater from portions of the city's sewer collection network — particularly central and nearby urban areas around Broadway Street. The plant is currently permitted under Wastewater Permit WQ0010401005 and has a design average flow of 8 million gallons per day. Treated effluent is discharged into the Corpus Christi Inner Harbor — part of the Corpus Christi Ship Channel system and ultimately connected to the Gulf of Mexico. This discharge point is part of a TPDES (Texas Pollutant Discharge Elimination System) permit that governs effluent limits to protect water quality.
- **Greenwood Wastewater Treatment Plant** — The Greenwood WWTP's primary role is to collect and treat sewage (wastewater) from homes, businesses, and other sources in its service area so that it meets state and federal standards before discharge. The Greenwood WWTP services what the city calls the Greenwood Service Basin, which includes approximately 18 lift stations and covers an area from roughly Hunter Road (north) to Chapman Ranch Road (south) — around 38 square miles of the city's sewer collection service area. The plant is currently permitted under Wastewater Permit WQ0010401003 and has a permitted average flow capacity of about 8 million gallons per day (MGD) and a peak flow capacity near 24 MGD. Under its Texas Pollutant Discharge Elimination System (TPDES) permit, the Greenwood plant's treated effluent is released into a local tributary known locally as La Volla Creek. That creek flows into Oso Creek, which eventually connects to Oso Bay and then the larger Bays and Estuaries around Corpus Christi.
- **Laguna Madre WWTP** — The Laguna Madre WWTP serves portions of the eastern/southeastern area of Corpus Christi near the bayfront and coastal neighborhoods in the city limits. It is one of several wastewater plants operated by Corpus Christi Water supporting the municipality's wastewater infrastructure. The plant is currently permitted under Wastewater Permit WQ0010401008 has a permitted average flow capacity of about 3 million gallons per day (MGD). The treated effluent from the Laguna Madre WWTP is authorized to discharge into Corpus Christi Bay — part of the Texas Bays and Estuaries system (Water Quality Segment No. 2481).

- **Whitecap Wastewater Treatment Plant** — Whitecap Wastewater Treatment Plant (Whitecap WWTP) is located at 13409 Whitecap Boulevard, near the west end of Whitecap Boulevard on Padre Island, Corpus Christi, Nueces County, Texas, 78418. The plant is currently permitted under Wastewater Permit WQ0010401000 has a permitted average flow capacity of 1.2 to 2 million gallons per day (MGD). The Whitecap Wastewater Treatment Plant (in Corpus Christi, Texas) discharges its treated effluent into the Laguna Madre, a shallow coastal lagoon on the Gulf Coast of Texas. The plant's discharge permit authorizes direct discharge of treated wastewater to Laguna Madre in Segment No. 2491 of the Bays and Estuaries.

B. Wastewater Data for Service Area (if applicable)

1. Percent of water service area served by wastewater system: 100%
2. Monthly volume treated for previous five years (in 1,000 gallons):

<i>Year</i>	2020	2021	2022	2023	2024
<i>Month</i>					
January	772,508.03	872,783.22	811,570.10	828,322.33	879,531.75
February	682,157.88	770,705.20	716,651.38	731,444.32	776,664.44
March	851,774.32	962,338.66	894,844.51	913,315.67	969,779.64
April	789,264.95	891,715.27	829,174.34	846,289.95	898,610.18
May	932,413.15	1,053,444.79	979,560.87	999,780.72	1,061,590.22
June	865,544.56	977,896.34	909,311.05	928,080.82	985,457.62
July	815,610.24	921,480.30	856,851.78	874,538.71	928,605.37
August	776,747.07	877,572.51	816,023.49	832,867.64	884,358.07
September	885,348.62	1,000,271.05	930,116.50	949,315.74	1,008,005.34
October	817,687.84	923,827.59	859,034.44	876,766.42	930,970.80
November	766,303.94	865,773.81	805,052.30	821,669.99	872,468.14
December	774,639.40	875,191.26	813,809.25	830,607.70	881,958.41
Totals	9,730,000.00	10,993,000.00	10,222,000.00	10,433,000.00	11,078,000.00

Water Conservation Plan

In addition to the utility profile, please attach the following as required by Title 30, Texas Administrative Code, §288.2. Note: If the water conservation plan does not provide information for each requirement, an explanation must be included as to why the requirement is not applicable.

A. Record Management System

The water conservation plan must include a record management system which allows for the classification of water sales and uses in to the most detailed level of water use data currently available to it, including if possible, the following sectors: residential (single and multi-family), commercial.

B. Specific, Quantified 5 & 10-Year Targets

The water conservation plan must include specific, quantified five-year and ten-year targets for water savings to include goals for water loss programs and goals for municipal use in gallons per capita per day. Note that the goals established by a public water supplier under this subparagraph are not enforceable. These goals must be updated during the five-year review and submittal.

C. Measuring and Accounting for Diversions

The water conservation plan must include a statement about the water suppliers metering device(s), within an accuracy of plus or minus 5.0% in order to measure and account for the amount of water diverted from the source of supply.

D. Universal Metering

The water conservation plan must include and a program for universal metering of both customer and public uses of water, for meter testing and repair, and for periodic meter replacement.

E. Measures to Determine and Control Water Loss

The water conservation plan must include measures to determine and control water loss (for example, periodic visual inspections along distribution lines; annual or monthly audit of the water system to determine illegal connections; abandoned services; etc.).

F. Continuing Public Education & Information

The water conservation plan must include a description of the program of continuing public education and information regarding water conservation by the water supplier.

G. Non-Promotional Water Rate Structure

The water supplier must have a water rate structure which is not “promotional,” i.e., a rate structure which is cost-based and which does not encourage the excessive use of water. This rate structure must be listed in the water conservation plan.

H. Reservoir Systems Operations Plan

The water conservation plan must include a reservoir systems operations plan, if applicable, providing for the coordinated operation of reservoirs owned by the applicant within a common watershed or river basin in order to optimize available water supplies.

I. Enforcement Procedure and Plan Adoption

The water conservation plan must include a means for implementation and enforcement, which shall be evidenced by a copy of the ordinance, rule, resolution, or tariff, indicating official adoption of the water conservation plan by the water supplier; and a description of the authority by which the water supplier will implement and enforce the conservation plan.

J. Coordination with the Regional Water Planning Group(s)

The water conservation plan must include documentation of coordination with the regional water planning groups for the service area of the public water supplier in order to ensure consistency with the appropriate approved regional water plans.

K. Plan Review and Update

A public water supplier for municipal use shall review and update its water conservation plan, as appropriate, based on an assessment of previous five-year and ten-year targets and any other new or updated information. The public water supplier for municipal use shall review and update the next revision of its water conservation plan not later than May 1, 2009, and every five years after that date to coincide with the regional water planning group. The revised plan must also include an implementation report.

V. ADDITIONAL REQUIREMENTS FOR LARGE SUPPLIERS

Required of suppliers serving population of 5,000 or more or a projected population of 5,000 or more within the next ten years:

Leak Detection and Repair

The plan must include a description of the program of leak detection, repair, and water loss accounting for the water transmission, delivery, and distribution system in order to control unaccounted for uses of water.

Contract Requirements

A requirement in every wholesale water supply contract entered into or renewed after official adoption of the plan (by either ordinance, resolution, or tariff), and including any contract extension, that each successive wholesale customer develop and implement a water conservation plan or water conservation measures using the applicable elements in this chapter. If the customer intends to resell the water, the contract between the initial supplier and customer must provide that the contract for the resale of the water must have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures in accordance with the provisions of this chapter.

VI. ADDITIONAL CONSERVATION STRATEGIES

Any combination of the following strategies shall be selected by the water supplier, in addition to the minimum requirements of 30 TAC §288.2(1), if they are necessary in order to achieve the stated water conservation goals of the plan. The commission may require by commission order that any of the following strategies be implemented by the water supplier if the commission determines that the strategies are necessary in order for the conservation plan to be achieved:

1. Conservation-oriented water rates and water rate structures such as uniform or increasing block rate schedules, and/or seasonal rates, but not flat rate or decreasing block rates;
2. Adoption of ordinances, plumbing codes, and/or rules requiring water conserving plumbing fixtures to be installed in new structures and existing structures undergoing substantial modification or addition;
3. A program for the replacement or retrofit of water-conserving plumbing fixtures in existing structures;
4. A program for reuse and/or recycling of wastewater and/or graywater;
5. A program for pressure control and/or reduction in the distribution system and/or for customer connections;
6. A program and/or ordinance(s) for landscape water management;
7. A method for monitoring the effectiveness and efficiency of the water conservation plan; and
8. Any other water conservation practice, method, or technique which the water supplier shows to be appropriate for achieving the stated goal or goals of the water conservation plan.

VII. WATER CONSERVATION PLANS SUBMITTED WITH A WATER RIGHT APPLICATION FOR NEW OR ADDITIONAL STATE WATER

Water Conservation Plans submitted with a water right application for New or Additional State Water must include data and information which:

1. support the applicant's proposed use of water with consideration of the water conservation goals of the water conservation plan;
2. evaluates conservation as an alternative to the proposed appropriation; and
3. evaluates any other feasible alternative to new water development including, but not limited to, waste prevention, recycling and reuse, water transfer and marketing, regionalization, and optimum water management practices and procedures.

Additionally, it shall be the burden of proof of the applicant to demonstrate that no feasible alternative to the proposed appropriation exists and that the requested amount of appropriation is necessary and reasonable for the proposed use.



Texas Commission on Environmental Quality

Water Availability Division

MC-160, P.O. Box 13087 Austin, Texas 78711-3087

Telephone (512) 239-4600, FAX (512) 239-2214

Utility Profile and Water Conservation Plan Requirements for Wholesale Public Water Suppliers

This form is provided to assist wholesale public water suppliers in water conservation plan development. If you need assistance in completing this form or in developing your plan, please contact the Conservation staff of the Resource Protection Team in the Water Availability Division at (512) 239-4600.

Water users can find best management practices (BMPs) at the Texas Water Development Board's website <http://www.twdb.texas.gov/conservation/BMPs/index.asp>. The practices are broken out into sectors such as Agriculture, Commercial and Institutional, Industrial, Municipal and Wholesale. BMPs are voluntary measures that water users use to develop the required components of Title 30, Texas Administrative Code, Chapter 288. BMPs can also be implemented in addition to the rule requirements to achieve water conservation goals.

Contact Information

Name: City of Corpus Christi

Address: 2726 Holly Rd, Corpus Christi, TX 78415

Telephone Number: (361) 826-1826 Fax: ()

Water Right No.(s): 1947, 2345, 2464, 3214, 5434, 5655, 5736, 13675, 13676, 14124

Regional Water Planning Group: Regional Water Planning Group N

Person responsible for implementing conservation program: Esteban Ramos Phone: (361) 826-3294

Form Completed By: Esteban Ramos

Title: Water Resource Manager

Signature: _____ Date: / /

A water conservation plan for wholesale public water suppliers must include the following requirements (as detailed in 30 TAC Section 288.5). If the plan does not provide information for each requirement, you must include in the plan an explanation of why the requirement is not applicable.

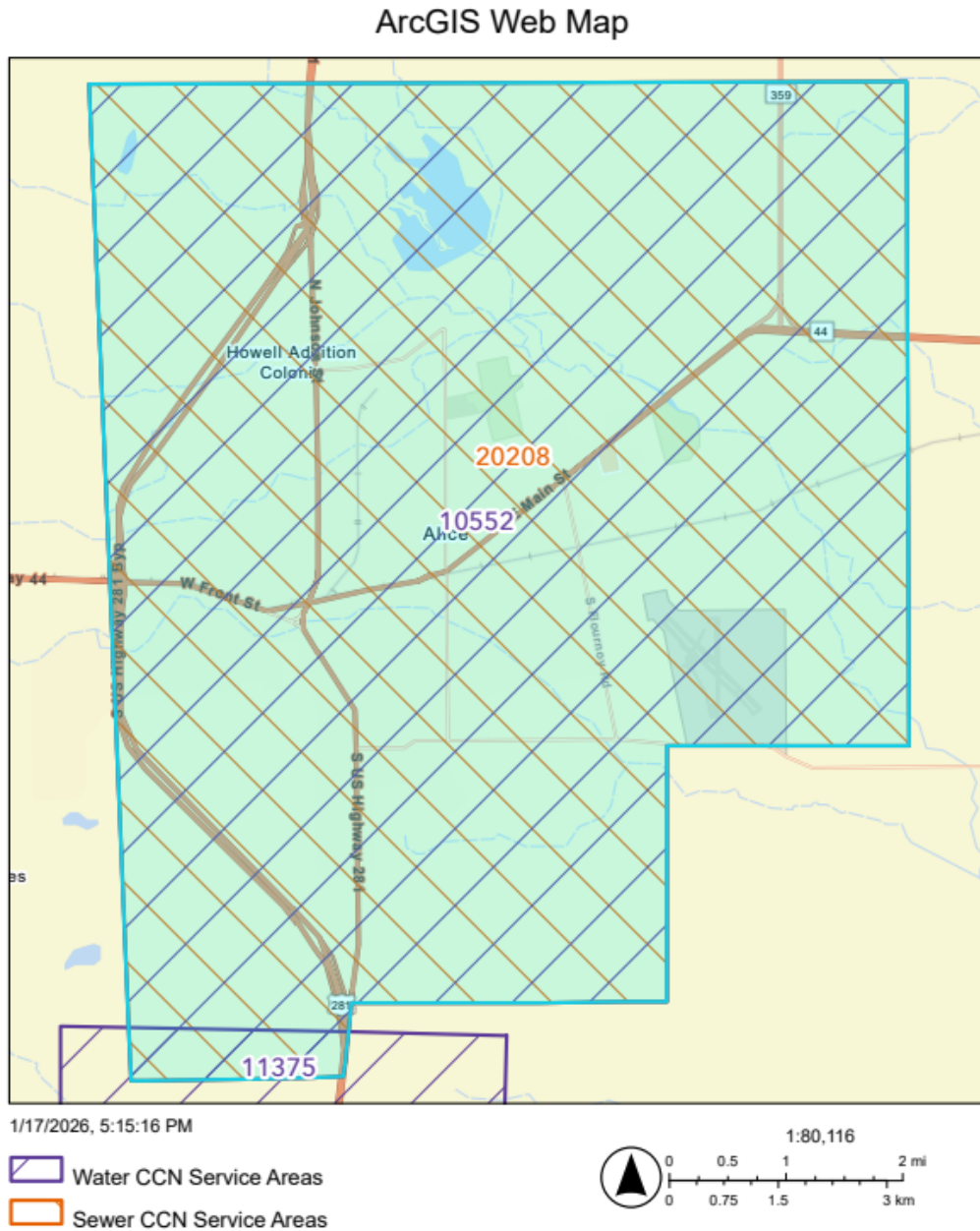
Utility Profile

I. WHOLESALE SERVICE AREA POPULATION AND CUSTOMER DATA

A. Population and Service Area Data: ALICE, TX CCN 10052

(Please attach a copy of service-area map)

Service area size (in square miles): 12.6



Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

B. Population and Service Area Data: **BEEVILLE, TX CCN 10550**

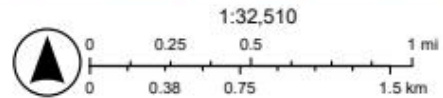
Service area size (in square miles): **6.38**

ArcGIS Web Map



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-  Water CCN Service Areas
-  Sewer CCN Service Areas

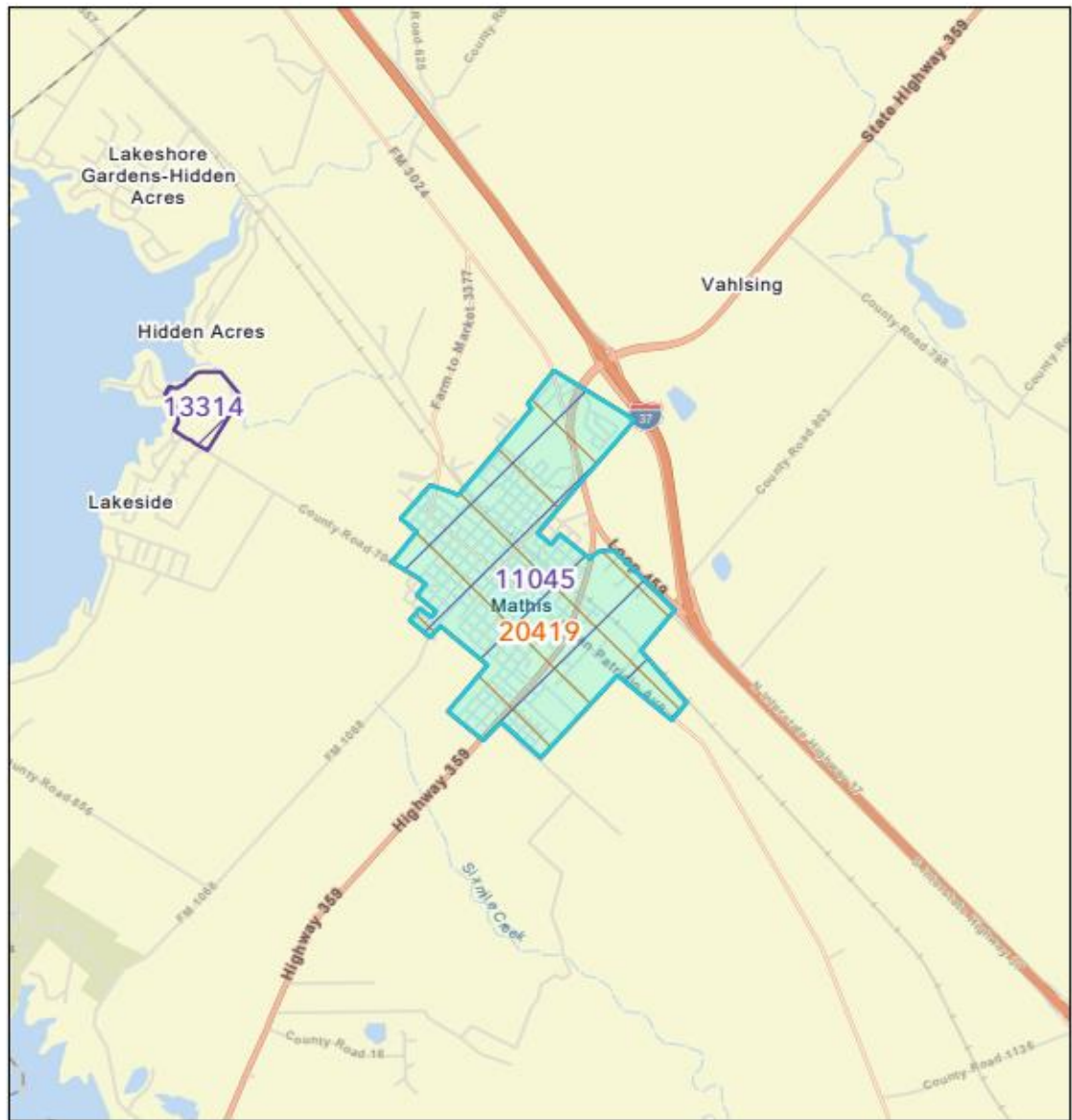


Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

C. Population and Service Area Data: **MATHIS, TX CCN 11045**

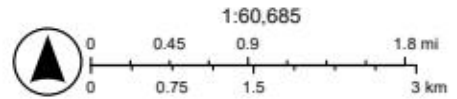
Service area size (in square miles): 3.32

ArcGIS Web Map



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-  Water CCN Service Areas
-  Sewer CCN Service Areas



Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

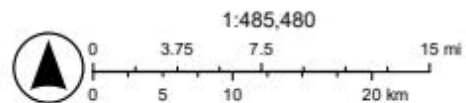
D. Population and Service Area Data: NUECES COUNTY WCID 4 CCN 10571

ArcGIS Web Map



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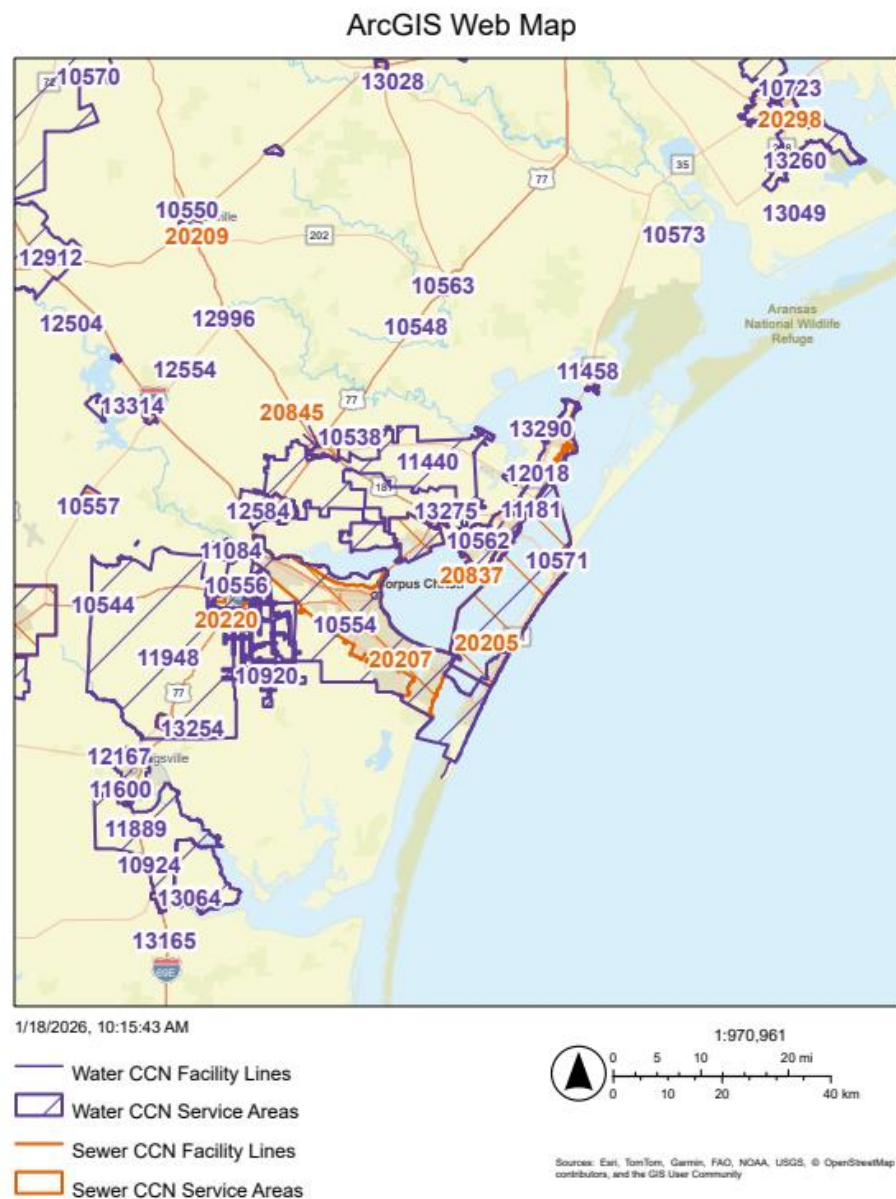
-  Water CCN Facility Lines
-  Water CCN Service Areas
-  Sewer CCN Service Areas



Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

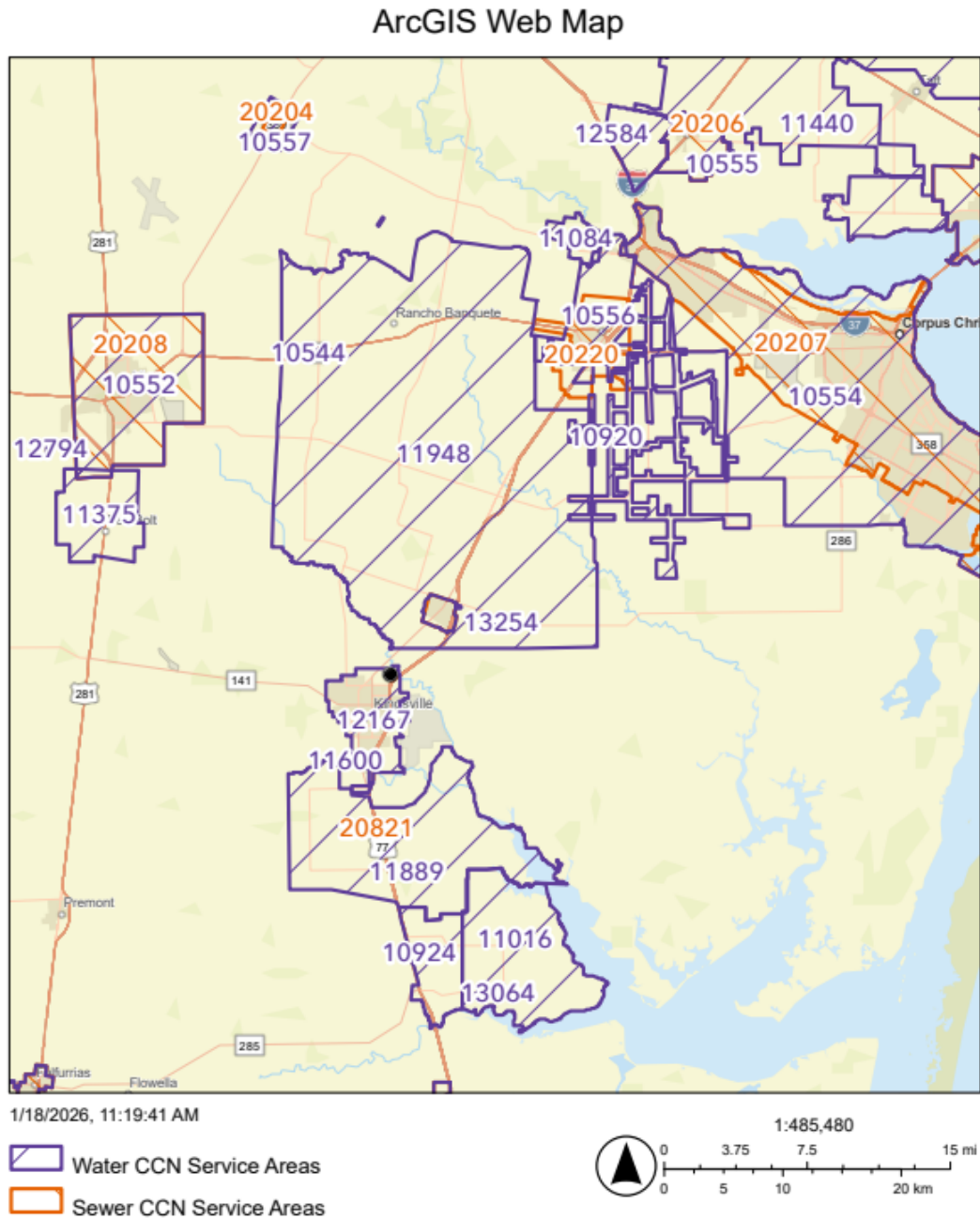
E. Population and Service Area Data: SAN PATRICIO MUNICIPAL WATER DISTRICT

SAN PATRICIO MWD CCN 10572
CITY OF ARANSAS PASS CCN 11181
CITY OF GREGORY CCN 13275
CITY OF INGLESIDE CCN 10562
CITY OF INGLESIDE BY THE BAY CCN 20837
CITY OF ODEM CCN 10555
NUECES COUNTY 4 CCN 10571
CITY OF PORTKAND CCN 10541
RINCON WATER SUPPLY CCN 11440
CITY OF ROKPORT CCN 10565
SEABORD WSC CCN 12584

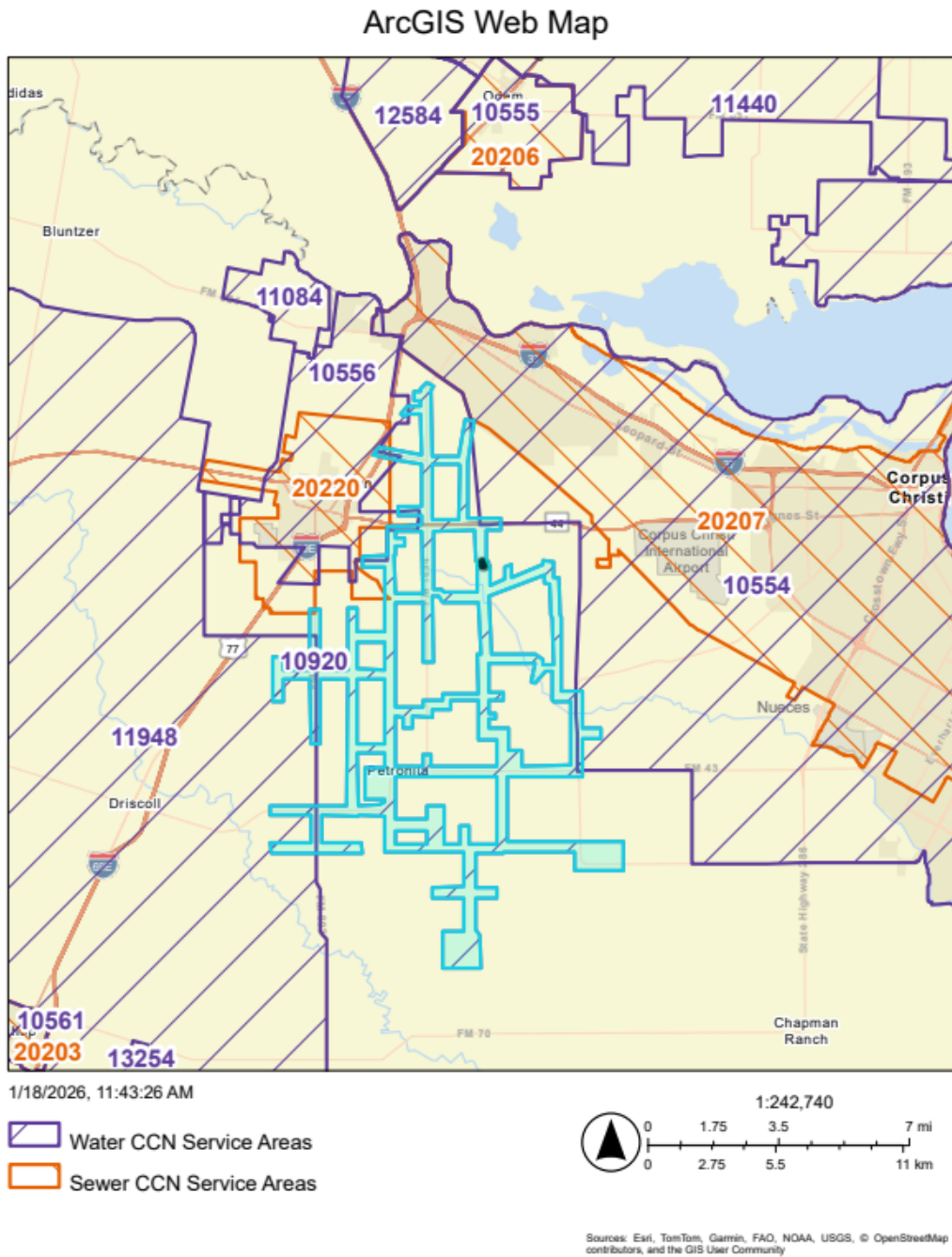


F. Population and Service Area Data: SOUTH TEXAS WATER AUTHORITY

CITY OF KINGSVILLE CCN 12167 (includes Ricardo WSC)
 NUECES WSC 10544 (Includes City of Agua Dulce)
 NUECES WSC 10561 (Includes City of Bishop)
 NUECES WSC 11948 (Includes City of Driscoll)



G. Population and Service Area Data: **VIOLET WATER SUPPLY CORPORATION CCN 10920**



1. Current population of service area:

153,933

2. Current population served for:

a. Water 153,933

b. Wastewater 0

3. Population served for previous five years:

<i>Year</i>	<i>Population</i>
2020	156,409
2021	157,645
2022	150,134
2023	152,143
2024	153,933

4. Projected population for service area in the following decades:

<i>Year</i>	<i>Population</i>
2030	147,699
2040	150,313
2050	150,463
2060	149,561
2070	148,663

5. List source or method for the calculation of current and projected population size.

Population data for the wholesale service area was taken from available census data and from data provided in Texas Water Development Board Water Use Surveys provided by the City of Corpus Christi.

H. Customer Data

List (or attach) the names of all wholesale customers, amount of annual contract, and amount of annual use for each customer for the previous year:

<i>Wholesale Customer</i>	<i>Contracted Amount (Acre-feet)</i>	<i>Previous Year Amount of Water Delivered (acre-feet)</i>
City of Alice, TX	7,500	3,109
City of Beeville, TX	10% Above Previous Year's Usage or the Three Year High Average, whichever is Greater	2,396
City of Mathis	As Needed	643
Nueces County WCID 4	442 Acre Feet Minimum per Year	2,212
San Patricio MWD	Maximum of 81,560 Acre Feet per Year	45,951

South Texas Water Authority	19,000 Acre Feet per Year	1,731
Violet WSC	As Needed	192

II. WATER USE DATA FOR SERVICE AREA

A. Water Delivery

1. Indicate if the water provided under wholesale contracts is treated or raw water and the annual amounts for the previous five years (in acre feet):

<i>Year</i>	<i>Treated Water</i>	<i>Raw Water</i>
2020	3,971	35,449
2021	4,950	34,547
2022	4,172	45,423
2023	4,113	44,304
2024	4,135	52,099
Totals	21,340	211,822

B. Water Accounting Data

2. Total amount of water diverted at the point of diversion(s) for the previous five years (in acre-feet) for all water uses:

<i>Year</i>	<i>2020</i>	<i>2021</i>	<i>2022</i>	<i>2023</i>	<i>2024</i>
<i>Month</i>					
January	3,063	2,794	3,500	3,860	4,444
February	2,821	2,852	3,443	3,361	3,987
March	3,169	3,118	4,229	3,944	4,146
April	3,045	2,748	4,080	3,067	4,817
May	3,215	3,079	3,939	4,150	4,934
June	3,506	3,977	5,187	4,394	4,694
July	3,706	3,216	4,903	4,618	5,129
August	3,946	3,786	4,861	5,069	5,211
September	3,353	3,520	3,934	4,705	4,822
October	3,307	2,970	3,916	4,108	5,137
November	3,154	3,210	3,769	3,161	4,275
December	3,134	4,226	3,833	3,978	4,638

Totals	<u>39,419</u>	<u>39,497</u>	<u>49,595</u>	<u>48,417</u>	<u>56,234</u>
---------------	---------------	---------------	---------------	---------------	---------------

3. Wholesale population served and total amount of water diverted for **municipal use** for the previous five years (in acre-feet):

<i>Year</i>	<i>Total Population Served</i>	<i>Total Annual Water Diverted for Municipal Use</i>
2020	156,409	39,419
2021	157,645	39,497
2022	150,134	49,595
2023	152,143	48,417
2024	153,933	56,234

C. Projected Water Demands

If applicable, project and attach water supply demands for the next ten years using information such as population trends, historical water use, and economic growth in the service area over the next ten years and any additional water supply requirements from such growth.

III. WATER SUPPLY SYSTEM DATA

A. Projected Water Demands

1. List all current water supply sources and the amounts authorized (in acre feet) with each.

<i>Water Type</i>	<i>Source</i>	<i>Amount Authorized</i>
Surface Water	<u>Multiple Sources (See Below)</u>	<u>830,668</u>
Groundwater	<u></u>	<u></u>
Other	<u></u>	<u></u>

WR Number	WR Type	Source	Acre Feet
1947	Water Supply Contract (WSC)	Lavaca Basin	41,840
2345	Water Supply Contract (WSC)	Lavaca Basin	4,500
2464	Certificate of Adjudication (ADJ)	Nueces Basin	304,898
3214	Certificate of Adjudication (ADJ)	Nueces Basin	139,000
5434	Certificate of Adjudication (ADJ)	Colorado Basin	35,000
5655	Water Right Permit (WRPERM)	Nueces-Rio Grande Basin	67.2
5736	Water Right Permit (WRPERM)	Nueces Basin	8,000

13675	Water Right Permit (WRPERM)	San Antonio-Nueces Basin	186,295
13676	Water Right Permit (WRPERM)	Nueces-Rio Grande Basin	93,148
14124	Water Right Permit (WRPERM)	Nueces Basin	17,920

B. Treatment and Distribution System (if providing treated water)

1. Design daily capacity of system (MGD):

161.5 MGD

2. Storage capacity (MGD):

a. Elevated 10 MGD

b. Ground 27.5 MGD

3. Please attach a description of the water system. Include the number of treatment plants, wells, and storage tanks

Water treatment infrastructure

- The system **operates a single surface water treatment plant** — the O.N. Stevens Water Treatment Plant — which treats raw water from regional surface sources for drinking supply.

Water sources and wells

- Traditionally the system has relied on **surface water from four regional sources** (Lake Corpus Christi, Choke Canyon Reservoir, Lake Texana, and the Colorado River via the Mary Rhodes Pipeline) rather than wells.
- **Groundwater wells** have recently been added as part of drought response efforts: the city is now using **about eight municipal groundwater wells** in rural Nueces County and has **additional wells under construction or planned** to augment supply amid low reservoir levels.

Storage facilities

- The water system includes **nine water storage tanks** that help balance distribution and maintain pressure throughout the service area.

IV. WASTEWATER SYSTEM DATA

A. Wastewater System Data (if applicable)

Wastewater data is not applicable.

1. Design capacity of wastewater treatment plant(s) (MGD):

2. Briefly describe the wastewater system(s) of the area serviced by the wholesale public water supplier. Describe how treated wastewater is disposed. Where applicable, identify treatment plant(s) with the TCEQ name and number, the operator, owner, and the receiving stream if wastewater is discharged.

B. Wastewater Data for Service Area (if applicable)

Wastewater data is not applicable.

1. Percent of water service area served by wastewater system: %
2. Monthly volume treated for previous five years (in 1,000 gallons):

<i>Year</i>					
<i>Month</i>					
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					
Totals					

Water Conservation Plan

In addition to the description of the wholesaler's service area (profile from above), a water conservation plan for a wholesale public water supplier must include, at a minimum, additional information as required by Title 30, Texas Administrative Code, Chapter 288.5. Note: If the water conservation plan does not provide information for each requirement an explanation must be included as to why the requirement is not applicable.

A. Specific, Quantified 5 & 10-Year Targets

The water conservation plan must include specific, quantified 5-year and 10-year targets for water savings including, where appropriate, target goals for municipal use in gallons per capita per day for the wholesaler's service area, maximum acceptable water loss, and the basis for the development of these goals. Note that the goals established by a wholesale water supplier under this subparagraph are not enforceable. These goals must be updated during the 5-year review and submittal.

B. Measuring and Accounting for Diversions

The water conservation plan must include a description as to which practice(s) and/or device(s) will be utilized to measure and account for the amount of water diverted from the source(s) of supply.

C. Record Management Program

The water conservation plan must include a monitoring and record management program for determining water deliveries, sales, and losses.

D. Metering/Leak-Detection and Repair Program

The water conservation plan must include a program of metering and leak detection and repair for the wholesaler's water storage, delivery, and distribution system.

E. Contract Requirements for Successive Customer Conservation

The water conservation plan must include a requirement in every water supply contract entered into or renewed after official adoption of the water conservation plan, and including any contract extension, that each successive wholesale customer develop and implement a water conservation plan or water conservation measures using the applicable elements of Title 30 TAC Chapter 288. If the customer intends to resell the water, then the contract between the initial supplier and customer must provide that the contract for the resale of the water must have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures in accordance with the provisions of this chapter.

F. Reservoir Systems Operations Plan

The water conservation plan must include a reservoir systems operations plan, if applicable, providing for the coordinated operation of reservoirs owned by the applicant within a common watershed or river basin. The reservoir systems operations plan shall include optimization of water supplies as one of the significant goals of the plan.

G. Enforcement Procedure and Official Adoption

The water conservation plan must include a means for implementation and enforcement, which shall be evidenced by a copy of the ordinance, rule, resolution, or tariff, indicating official adoption of the water conservation plan by the water supplier; and a description of the authority by which the water supplier will implement and enforce the conservation plan.

H. Coordination with the Regional Water Planning Group(s)

The water conservation plan must include documentation of coordination with the regional water planning groups for the service area of the wholesale water supplier in order to ensure consistency with the appropriate approved regional water plans.

Example statement to be included within the water conservation plan:

The service area of the _____ (name of water supplier) is located within the _____ (name of regional water planning area or areas) and _____ (name of water supplier) has provided a copy of this water conservation plan to the _____ (name of regional water planning group or groups).

I. Plan Review and Update

A wholesale water supplier shall review and update its water conservation plan, as appropriate based on an assessment of previous 5-year and 10-year targets and any other new or updated information. A wholesale water supplier shall review and update the next revision of its water conservation plan no later than May 1, 2009, and every five years after that date to coincide with the regional water planning group. The revised plan must also include an implementation report.

V. ADDITIONAL CONSERVATION STRATEGIES

Any combination of the following strategies shall be selected by the water wholesaler, in addition to the minimum requirements of 30 TAC §288.5(1), if they are necessary in order to achieve the stated water conservation goals of the plan. The commission may require by commission order that any of the following strategies be implemented by the water supplier if the commission determines that the strategies are necessary in order for the conservation plan to be achieved:

1. Conservation-oriented water rates and water rate structures such as uniform or increasing block rate schedules, and/or seasonal rates, but not flat rate or decreasing block rates;
2. A program to assist agricultural customers in the development of conservation, pollution prevention and abatement plans;
3. A program for reuse and/or recycling of wastewater and/or graywater;
4. Any other water conservation practice, method, or technique which the wholesaler shows to be appropriate for achieving the stated goal or goals of the water conservation plan.

VI. WATER CONSERVATION PLANS SUBMITTED WITH A WATER RIGHT APPLICATION FOR NEW OR ADDITIONAL STATE WATER

Water Conservation Plans submitted with a water right application for New or Additional State Water must include data and information which:

1. support the applicant's proposed use of water with consideration of the water conservation goals of the water conservation plan;
2. evaluates conservation as an alternative to the proposed appropriation; and
3. evaluates any other feasible alternative to new water development including, but not limited to, waste prevention, recycling and reuse, water transfer and marketing, regionalization, and optimum water management practices and procedures.

Additionally, it shall be the burden of proof of the applicant to demonstrate that no feasible alternative to the proposed appropriation exists and that the requested amount of appropriation is necessary and reasonable for the proposed use.

Appendix D - Water Conservation Plans Submitted with a Water Right Application for New or Additional State Water

This supplement to Corpus Christi's Water Conservation Plan addresses the requirement of §288.7 of the Texas Administrative Code that a water conservation plan submitted with an application for a new or additional appropriation of water must include data and information which:

1. Supports the applicant's proposed use of water with consideration of the water conservation goals of the WCP;
2. Evaluates conservation as an alternative to the proposed appropriation; and
3. Evaluates any other feasible alternative to new water development including, but not limited to, waste prevention, recycling and reuse, water transfer and marketing, regionalization, and optimum water management practices and procedures.

Applicant's proposed use of water. The applicant (City of Corpus Christi) proposes to use the water as requested from the Inner Harbor and La Quinta Channel by desalination and use for municipal purposes within Aransas, Kleberg, Nueces and San Patricio Counties. This water would be used to meet water supply needs within those counties, including retail sales to residential, commercial, manufacturing and institutional customers. Water needs were identified through the state water planning process, which considers reduced per capita water use that is consistent with the goals of Corpus Christi's WCP.

Conservation as an alternative to the requested appropriation. As part of the regional planning process, the planning groups are required to perform a comprehensive analysis of potentially feasible water management strategies, including consideration of water conservation. The proposed water right application supports a recommended project in the 2016 Region N Water Plan and 2017 State Water Plan. The five-year and ten-year per capita goals outlined in Corpus Christi's WCP are consistent with the 2016 Region N projections. In addition, this project promotes regionalization and serves as an alternative to existing fresh water supplies that further promotes conservation of existing fresh water supplies.

Other feasible alternatives. The proposed amount of appropriation outlined in the application is consistent with the 2016 Region N Plan as evidenced by a letter attached with the water right application.

The 2016 Region N Plan identified additional potentially feasible alternatives to the proposed desalination project to meet needs in Nueces County which include:

- GBRA Lower Basin Off-Channel Reservoir
- Additional Reuse – Corpus Christi
- Manufacturing Water Conservation
- O.N. Stevens WTP Improvements

The 2016 Region N Plan identified additional potentially feasible alternatives to the proposed desalination project to meet needs in San Patricio County which include:

- GBRA Lower Basin Off-Channel Reservoir
- Manufacturing Water Conservation
- Portland Reuse Pipeline



- SPMWD Industrial WTP Improvements

Desalination is the only recommended strategy that has sufficient quantity to meet the projected needs in these counties.

Appendix E - City of Corpus Christi Model Industrial Water Conservation Plan



Foreword

This Model Industrial Water Conservation Plan was prepared by Freese and Nichols for the City of Corpus Christi as an addendum to the 2019 Water Conservation Plan. It is intended as a model water conservation plan for industrial customers highlighting best management practices that could be implemented for those industrial customers who are required to submit individual water conservation plans to the Texas Commission on Environmental Quality (TCEQ). The Model Industrial Water Conservation Plan was prepared pursuant to TCEQ rules.

The City of Corpus Christi has many industrial users with widely varying processes and water uses, and it is difficult to generate a model plan that is applicable for all industries. This model plan provides best management practice that an industrial customer may implement to reduce water consumption.

Questions regarding this Model Industrial Water Conservation Plan should be addressed to the following:

Esteban Ramos Water Resource Manager
City of Corpus Christi, Water Utilities Department
(361) 826-3294
estebanr2@cctexas.com

This Model Industrial Water Conservation Plan is based on the Texas Administrative Code in effect on October 16, 2019 and considers water conservation best management practices from the Texas Water Development Board's *Best Management Practices for Industrial Water Users*. Currently, the Water Conservation Advisory Council (WCAC) is reviewing additional Best Management Practices (BMPs) for industrial water users.

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City of Corpus Christi

Model Industrial Water Conservation Plan

As referenced in the Forward and Appendix D, this Model Industrial Water Conservation Plan is provided as a guidance document to support industrial facilities in developing compliant, facility-specific plans. The document includes boilerplate language and section-by-section guidance outlining the required components, recommended best management practices, and considerations for efficient water use and long-term conservation. To avoid confusion with outdated or site-specific information from prior versions, certain data fields within this document have been replaced with placeholder values (e.g., “[X]” or “[YYYY]”). These placeholders are intentional and are meant to be completed by each facility using current, accurate data relevant to their operations.

1.0 Introduction and Objectives

Water supply has always been a key issue in the development of Texas. In recent years, the increasing population and economic development in Corpus Christi have led to growing demands for water supplies. At the same time, local and less expensive sources of water supply are largely developed. Additional supplies to meet higher demands will be expensive and difficult to develop. It is therefore important that efficient use of existing supplies is emphasized to make them last as long as possible.

Recognizing the need for efficient use of existing water supplies, the Texas Commission on Environmental Quality (TCEQ) has developed guidelines and requirements governing the development of water conservation plans for industrial or mining uses (Appendix B)¹.

This Model Industrial Water Conservation Plan includes measures that are intended to result in ongoing, long-term water savings. Best management practices established by the Texas Water Development Board were also considered in the development of the water conservation measures².

This Model Industrial Water Conservation Plan addresses all of the elements required by TCEQ. Each industrial user should customize the details to match its unique situation. At a minimum, an industry's conservation plan should include:

- Setting five-year and ten-year goals for water use (Section 4).
- Completing a water conservation implementation report (Section 9).
- Adopting policies or regulations approving the model plan (Section 9).

The final adopted version should be provided to the City of Corpus Christi and the TCEQ.

The objectives of this model plan are:

- To reduce water consumption from **the** level that would prevail without conservation efforts.
- To reduce the loss and waste of water.
- To improve efficiency in the use of water.
- To document the level of recycling and reuse within the industrial processes and for non-potable uses.

The model plan lists the TCEQ rules; describes industrial customers for the City of Corpus Christi; provides recommendations for setting conservation goals; describes water measurement devices and methods; discusses leak detection, repair, and water loss accounting; and reports existing and future water use efficiency practices.

¹ Superscripted numbers match references listed in Appendix A.

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2.0 Texas Commission on Environmental Quality Rules

The TCEQ rules governing development of water conservation plans for industrial or mining use are contained in Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.3 of the Texas Administrative Code (TAC). Applicable TAC rules are presented in Appendix B. Holders of an existing permit, certified filing, or certificate of adjudication for the appropriation of surface water in the amount of 1,000 acre-feet a year or more for industrial uses must develop, submit, and implement a water conservation plan.

A water conservation plan is defined as “A strategy or combination of strategies for reducing the volume of water withdrawn from a water supply source, for reducing the loss or waste of water, for maintaining or improving the efficiency in the use of water, for increasing the recycling and reuse of water, and for preventing the pollution of water. A water conservation plan may be a separate document identified as such or may be contained within another water management document(s).”³

Conservation Plan Requirements

The minimum requirements in the TAC Title 30, Part 1, Chapter 288 for water conservation plans for industrial or mining uses are shown below.

TAC Reference	Subject	Plan Location
30 TAC §288.3(a)(1)	Water Use in the Production Process	Section 3
30 TAC §288.3(a)(2)	Water Conservation Goals	Section 4
30 TAC §288.3(a)(3)	Accurate Metering	Section 5
30 TAC §288.3(a)(4)	Leak Detection, Repair, and Water Loss Accounting	Section 6
30 TAC §288.3(a)(5)	Water Use Efficiency Process and/or Equipment Upgrades	Section 7
30 TAC §288.3(a)(6)	Other Conservation Practices	Section 8
30 TAC §288.3(b)	Review and Update of Plan	Section 9
30 TAC §288.30(2)	Water Conservation Implementation Report	Section 9

TCEQ has also developed a Water Conservation Model Plan for Industrial Use⁴ which is available on their website that meets the requirements listed above.

3.0 Description of Water Use in the Production Process

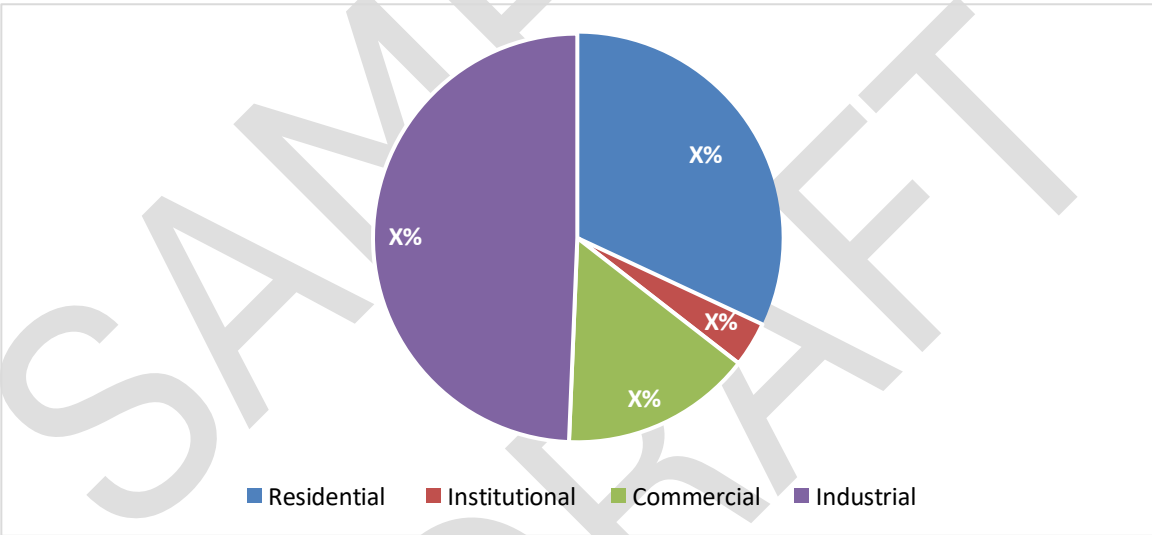
3.1 City of Corpus Christi Water Sources and Industrial Water Use Description

The City of Corpus Christi utilizes multiple sources from multiple river basins. Current sources include:

- Lake Corpus Christi via the Nueces River (Nueces River Basin)
- Choke Canyon Reservoir via the Nueces River (Nueces River Basin)
- Lake Texana via the Mary Rhodes Pipeline (Lavaca River Basin)
- Colorado River via the Mary Rhodes Pipeline (Colorado River Basin)

All the current sources are treated at the O.N. Stevens Water Treatment Plant before distribution. Separating treated demand by customer class, industrial customers represent the highest demand, accounting for [X] percent of the total. Figure 3-1 below shows year [YYYY] water use percentage by customer class for the City of Corpus Christi.

Figure 3-1: Water Use Percentage by Customer Class



In year [YYYY], there were approximately [X] treated water connections. These connections can be divided into the customer classes of residential, multi-family, commercial, industrial, wholesale, and institutional. Both institutional ([X] connections) and industrial ([X] connections) customers have so few connections that they constitute only a small percentage of the total connections. Residential Single-Family customers make up the largest percentage of connections with over [X] percent of the total.

Table 3-1: Top Large Volume Retail Customers	
Customer	Water Use Category
[Customer A]	Industrial
[Customer B]	Industrial
[Customer C]	Industrial
[Customer D]	Industrial
[Customer E]	Industrial

3.2 Model Industrial Water Conservation Plan Description of Water Use in the Production Process

[Insert a description of water use in the production process. Show a schematic of the production process with all water use locations and flow rates.]

This section must include a description of the use of the water in the production process, including how the water is diverted and transported from the source(s) of supply, how the water is utilized in the production process, and the estimated quantity of water consumed in the production process and therefore unavailable for reuse, discharge, or other means of disposal.]

4.0 Specification of Water Conservation Goals

4.1 City of Corpus Christi Water Conservation Plan Goals

The City of Corpus Christi has set five and ten-year goals in the 2025 Water Conservation Plan as shown in Table 4-1. Reducing water consumption at industrial facilities will help to achieve this goal.

Table 4-1: City of Corpus Christi Targets and Goals		
Achieve Date	Target for Total (GPCD)	Target for Water Loss (GPCD)
Five-Year Target Date: 2030	201	15
Ten-Year Target Date: 2035	191	15

4.2 Model Industrial Water Conservation Plan Specification of Water Conservation Goals

[This section must include specification of 5-year and 10-year water conservation goals and the basis for development of such goals. The goals established by an industrial user under this subparagraph are not enforceable.]

To determine feasible water conservation goals, to provide the basis for these goals, and to identify a schedule for conservation savings, a four-step water conservation implementation process may be completed:

- 1. The first step consists of a water audit for the industrial facility. A water audit consists of an inventory of all water supplied to the site and all on-site water uses, including the amount of water used for each purpose. A comparison of the water supplied to the water used will reveal the amount of water loss. Water loss should be no more than 10.0 percent of total water supplied.*
- 2. The second step is to identify sources of water waste and to design procedures to reduce water waste and minimize water loss. Water waste reduction measures may include reducing flow to process equipment, installing pressure-reducing valves, installing control or limit switches, or other measures.*
- 3. The third step is to identify methods to conserve water use in the industrial process, landscape irrigation, and other water uses. Emphasize water conservation methods that address the largest water uses identified in the audit step. Conservation methods could involve upgrading to water-efficient process equipment, water-wise landscaping, retrofit of domestic plumbing fixtures with water-efficient fixtures, employee education, and other methods.*
- 4. The fourth step is to identify opportunities to reuse process water. At the end of the process, is the water quality suitable for other uses? Is it economical to provide water treatment to improve the water quality to make it suitable for other uses?*

Based on the findings of the first four steps, set five and ten-year goals similar to the example below. The [Company/Facility Name] has set a five-year goal of reducing water use to ac-ft/yr by [five years from date of plan] and a ten-year goal of reducing water use to ac-ft/yr by [ten years from date of plan]. These goals will be achieved using the following water conservation methods:

In response to a charge by the 82nd Texas Legislature, the Texas Water Development Board and the TCEQ, in consultation with the Water Conservation Advisory Council, developed water use and calculation methodology for preparation of water use reports and water conservation plans in accordance with TCEQ rules. The guidance document⁵ contains a chapter on developing and evaluating water use in the industrial sector, including identifying total water use, appropriate metrics for evaluating water use, factors that may affect industrial water use, establishment of water conservation goals, and measurement of water savings.]

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5.0 Accurate Metering to Measure and Account for Water

5.1 City of Corpus Christi Metering to Measure and Account for Water

One of the key elements in water conservation is careful tracking of water use and control of losses. In order to carefully track and control losses, the City of Corpus Christi meters water entering industrial facilities within an accuracy of plus or minus 5.0 percent. Meter type and sizing varies based on the industrial facility.

5.2 Model Industrial Water Conservation Plan Metering to Measure and Account for Water

[Insert a description of meter locations; meter types; meter calibration frequency; meter calibration tolerance; and meter data collection, tabulation, and storage. Refer to the water use diagram as necessary.]

This section must include a description of the device(s) and/or method(s) within an accuracy of plus or minus five percent to be used to measure and account for the amount of water diverted from the source of supply.

To assist in tracking of water usage, consider installing additional meters at key locations in the industrial process, particularly if water loss is greater than 5 percent.]

6.0 Leak Detection, Repair, and Water Loss Accounting

6.1 City of Corpus Christi Leak Detection, Repair, and Water Loss Accounting

The Water Department has a full team of employees committed to identifying and repairing leaks in water distribution throughout the City. A crew of round-the-clock responders follow the procedure below to find and fix a leak:

1. A first responder is sent to the location to identify and mark the priority of the leak. Response time is 30 minutes to an hour.
2. Crews begin to turn the needed valves to isolate the leaking line. Line locates are called in to mark all other utility lines in the area of the leak prior to repairs. Depending on the severity of the leak, these locates can take up to approximately 24 hours
3. After line locates are complete, Distribution Leak crews respond to the leak and make all needed repairs.
4. After repairs are complete, the D & D crews back fill the area and replace grass as needed.

As with any aging infrastructure system, the City does have water loss between the treatment plant and the point of use. In order to reduce this water loss, the City performs an annual system water audit. This estimate of system water efficiency is achieved by comparing water delivered to the treatment plant, potable water produced, and water sold. The Water Department tracks numerous leak detection and repair activities and is able to evaluate its success using the asset management software to compile and track work orders. Using this data from the audit, the City is able to focus on specific areas where improvements in efficiency can be achieved.

The City of Corpus Christi has a goal to maintain water loss below 10% and keep the Infrastructure Leakage Index (ILI) at or under 3. The City encourages its industrial customers to adopt similar goals.

6.2 Model Industrial Water Conservation Plan Metering to Measure and Account for Water

[This section must include a description of leak-detection, repair, and water loss accounting in the water distribution system. Please amend the description below to match operations at your facility.]

Plant personnel are encouraged to observe leaks as they operate and maintain facilities throughout the day. Inspection of aboveground piping and pump packing should be a normal part of employee duties. In addition, flow meter readings should be logged on a daily basis. If a water leak is indicated by any of the above means, the source of the leak should be investigated and a work order for repairs should be issued as necessary.

Consider implementing an active leak detection and repair program if water loss is greater than 10.0 percent.]

7.0 Water Use Efficiency Process and/or Equipment Upgrades

7.1 Model Industrial Water Conservation Plan Water Use Efficiency Process and/or Equipment Upgrades

[This section must include a description of equipment and/or process modifications to improve water use efficiency.]

It is suggested that each facility include a description of existing water-efficient equipment or processes to demonstrate any water conservation savings that is already being achieved.

Equipment upgrades or process modifications should be a result of the third step in the four-step process recommended in Section 4.]

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8.0 Other Conservation Practices, Methods, or Techniques

8.1 Model Industrial Water Conservation Plan Other Conservation Practices, Methods or Techniques

[This section must include any other water conservation practice, method, or technique which the user shows to be appropriate for achieving the stated goal(s) of the water conservation plan.]

Other sections emphasize process water usage, equipment upgrades, and process modifications. This section should report on proposed conservation practices, methods, or techniques that address other water uses, such as domestic water use, housekeeping water use, and landscape irrigation.

The water audit in Section 4 should include a survey of landscape irrigation water use. This includes measurement of the landscape area, measurement of the total irrigable area, irrigation system checks and distribution uniformity analysis, and review or development of irrigation system scheduling. The water use survey should identify currently irrigated areas where irrigation can be discontinued due to low visibility or the plant materials that do not need supplemental irrigation. The survey should also identify areas with the opportunity for process water reuse, stormwater reuse, and reuse of treated effluent for landscape irrigation.

Best management practices established by the Texas Water Development Board should also be considered in the development of the water conservation measures.^{2]}

9.0 Implementation and Update of the Model Water Conservation Plan

9.1 City of Corpus Christi Implementation and Update of the Model Water Conservation Plan

Appendix IV contains a copy of the City of Corpus Christi City Council resolution adopting this Model Industrial Water Conservation Plan. The resolution designates responsible officials to implement the Model Plan.

Appendix V contains a copy of a letter to the chairman of the Region N Water Planning Group to inform the planning group of this Model Industrial Water Conservation Plan.

9.2 Model Industrial Water Conservation Plan Implementation and Updates

For facilities required to submit an industrial water conservation an annual implementation report is required. The implementation report for industrial use must include the following:

- *The list of dates and descriptions of the conservation measures implemented;*
- *Data about whether or not targets in the plans are being met;*
- *The actual amount of water saved; and*
- *If the targets are not being met, an explanation as to why any of the targets are not being met, including any progress on that particular target.]*

[Company/Facility] will submit a copy of their industrial water conservation plan to the City of Corpus Christi for their review and record.

A copy of the Board of Directors resolution adopting this industrial water conservation plan for [Company/Facility] is included as an attachment. The resolution designates responsible officials to implement and enforce the industrial water conservation plan.

A copy of a letter to the chairman of the Region N Water Planning Group to inform the planning group of this industrial water conservation plan is included.

This water conservation plan will be reviewed and updated every five years.

Model Industrial Water Conservation Plan Appendices

[The following are example appendices to accompany a completed Industrial Water Conservation Plan]

I. List of References

[In this section any additional references included in a completed Industrial Water Conservation Plan must be added.]

1. Texas Commission on Environmental Quality: “Water Conservation Plans for Industrial or Mining Use,” *Texas Administrative Code* Title 30 Part I Subchapter A §288.3, effective December 6, 2012.
2. Texas Water Development Board: *Best Management Practices for Industrial Water Users*, Austin, [Online] Available URL: <https://www.twdb.texas.gov/conservation/BMPs/Ind/doc/IndMiniGuide.pdf>, February 2013.
3. Texas Commission on Environmental Quality: “Definitions,” *Texas Administrative Code* Title 30 Part I Subchapter A §288.1, effective August 16, 2018.
4. Texas Commission on Environmental Quality TCEQ Form 20839 “*Industrial Water Conservation Plan*”, Austin [Online] Available URL: <http://www.tceq.texas.gov/assets/public/permitting/forms/20839.docx>, Revised June 2019
5. Texas Water Development Board and Texas Commission on Environmental Quality in consultation with Water Conservation Advisory Council: *Guidance and Methodology for Reporting on Water Conservation and Water Use*, Austin, [Online] Available URL: <http://www.twdb.texas.gov/conservation/doc/SB181Guidance.pdf>, December 2012.

II. Texas Commission on Environmental Quality Rules on Water Conservation Plans for Industrial or Mining Water Use

III. TCEQ Industrial Water Conservation Plan

IV. City Council Resolution Adopting the Model Water Conservation Plan

V. Letter to the Region N Water Planning Group

VI. Supplement to Corpus Christi Water Conservation Plan to Address TAC § 288.7

Appendix F - Letters to Region N Water Planning Group



Date:

Mr. Scott Bledsoe, Co-Chair
Region N Water Planning Group
c/o Nueces River Authority
539 HWY 83S
Uvalde, TX 78801

Re: 2025 City of Corpus Christi Water Conservation Plan

Dear Mr. Bledsoe:

Enclosed please find a copy of the 2025 City of Corpus Christi Water Conservation Plan, which is submitted to the Regional N Water Planning Group in accordance with 30 T.A.C. Chapter 288. This plan includes the required 5-year update to the 2020 City of Corpus Christi Water Conservation Plan. Additional copies have been provided to the Texas Commission on Environmental Quality and the Texas Water Development Board.

Sincerely,

Nick Winkelmann
Chief Operating Officer
City of Corpus Christi Water Utilities Department

Appendix G - Resolution for Adoption of Water Conservation Plan

