

South Texas Water Authority Water Conservation and Drought Contingency Plan

PART I—WATER CONSERVATION PLAN

Introduction:

The South Texas Water Authority provides treated water supplies to seven (7) wholesale customers. Its mission is to:

- provide a safe supply of water to communities, residents, and entities in central Kleberg County and western Nueces County,
- insure a dependable, abundant supply is available to our customers and
- utilize a regional approach that minimizes adverse cost of service based on entity size.

South Texas Water Authority does not provide wastewater service.

Service Area:

South Texas Water Authority supplies water to seven (7) entities. The following information is the latest population data and water usage for the last five (5) Fiscal Years. South Texas Water Authority provides wholesale service – not retail service – to these customers.

Entity	Population ¹	5 Year Average	Peak Demand	Monthly Peak
		(annual) FY '12 – '16	Month for FY '12 – '16	Demand FY '12 – '16
City of Agua Dulce	812	27,224,431	August 2012	3,320,430
City of Bishop	3,134	62,707,000	August 2014	12,353,000
City of Driscoll	739	31,820,009	July 2016	5,158,700
City of Kingsville	26,213	139,095,600	June 2012	45,306,000
Nueces Water Supply Corporation ^{2,3}	2,766	139,997,830	July 2016	18,161,360
Nueces County Water Control & Improvement District #5	726	26,880,462	August 2015	2,952,110
Ricardo Water Supply Corporation ^{4,5}	2,994	105,465,200	August 2012	13,831,000

¹2010 U.S. Census Bureau

²Nueces WSC's population is estimated at 3 times their service connections as of July 2017.

³Nueces WSC's average includes volumes for Coastal Acres LLC, KB Foundation (also known as IES and previously Teen Challenge) & GEO Detention Center (previously LCS)

⁴Ricardo WSC is served by a 12" line owned by the Corporation

⁵ Ricardo WSC's population is estimated at 3 times their service connections as of July 2017.

All customers are located within the Authority's district with the exception of the Nueces County Water Control and Improvement District #5 (Banquete), which is served as an Out-of-District customer.

The Authority's facilities were designed and constructed to serve four original customers, Kingsville, Bishop, Driscoll and Agua Dulce with 100% of their water needs. At the time of

construction in 1983, it was anticipated that these entities would initially require between 5 MGD and 7 MGD. The system was designed to meet a 50-year planning period; therefore, the delivery capacity of the system is 17 MGD.

South Texas Water Authority purchases treated water from the City of Corpus Christi. Supplies are transported approximately thirty (30) miles south from the O.N. Stevens Treatment Plant to the City of Kingsville via a 42" steel reinforced concrete cylinder water line (P-303). The City of Driscoll, the City of Bishop and a portion of the Nueces Water Supply Corporation customers are serviced along the route of the 42" transmission line. A smaller asbestos concrete spur line (14-inch and 12-inch) supplies customers in Agua Dulce, Banquete, and the remainder of the Nueces Water Supply Corporation's customers. Construction of the Regional Water System included pump station and storage facilities designed to provide a full day's supply during peak periods.

Direct water service to the Ricardo Water Supply Corporation is provided via a 12-inch transmission line. The Ricardo Water Supply Corporation owns the waterline which was funded by a combination of loan and grant funds through the US Department of Agriculture Rural Development Program.

In Fiscal Year 2016 (October 1, 2015 through September 30, 2016), the Authority purchased 532,850,000 gallons from the City of Corpus Christi. In the past 30+ years, however, the largest potential customer, Kingsville, has opted to continue using groundwater wells for the majority of its needs. Therefore, on average the Authority provides less than 2 MGD to its seven (7) customers. During extremely dry conditions, water demand has exceeded 3 MGD.

Regional Water Supply Source:

The Regional Provider's (the City of Corpus Christi) sources of water is from multiple river basins. The combined Lake Corpus Christi/Choke Canyon Reservoir System is fed from the Atascosa, Frio and Nueces Rivers. Lake Corpus Christi stores 257,260 acre-feet of water (83.8 billion gallons). And, Choke Canyon Reservoir stores 695,271 acre-feet (227 billion gallons). The 101-mile-long Mary Rhodes Pipeline transports water through a 64-inch pipeline from Lake Texana which is supplied by the Navidad and Lavaca Rivers. In 1993, the City of Corpus Christi entered into a contract with the Lavaca-Navidad River Authority to purchase 41,840 acre-feet (13.66 billion gallons) of water per year. According to the City's 2013 Water Conservation Plan, 40% to 70% of the water used by the City is transported from Lake Texana. In addition to the above mentioned supplies, in 1999 the City of Corpus Christi acquired senior water rights to 35,000 acre-feet of water per year in the Lower Colorado River. Construction of the Mary Rhodes Phase II Pipeline to access what is usually referred to as the Garwood water is now complete.

In the past, the City has explored the feasibility of desalination. In 2003, the City was one of three sites awarded a \$500,000 state grant to conduct a study as part of Governor Rick Perry's initiative to assess the potential desalination of seawater to help meet the state's regional water needs. The City also participated in a U.S. Army Corps of Engineers feasibility study to assess the potential for

desalination as a water supply source for the region. This study was jointly sponsored by the San Antonio Water System, San Antonio River Authority, and Guadalupe Blanco River Authority.

In 2005, the City also formed an Aquifer Storage and Recovery Conservation District (CCASRCD). This district was as the result of legislation passed in the 79th Texas Legislature. The CCASRCD, according to the City's Water Conservation Plan, is "dedicated to protecting groundwater supplies within the District, developing and maintaining an aquifer storage and recovery program, providing the most efficient use of groundwater resources to supplement existing supplies, while controlling and preventing waste of groundwater." It is not certain, at this time, whether the City's activities would be regional in nature.

This region continues its efforts in diversifying its resources. In July of 2017, the Texas Water Development Board announced that the City of Corpus Christi and the San Patricio Municipal Water District would receive low interest loan in the amount of \$2.75 Million from the State's SWIFT (State Water Implementation Fund for Texas) for a seawater desalination study described as follows:

A Consortium of industrial and municipal stakeholders has completed a feasibility study for the implementation of a seawater desalination plant in the Corpus Christi Bay Area. The intent of the Consortium is to conduct project definition and planning studies for implementing a full-scale seawater desalination project. This funding application is to address those preparation and definition activities which will include recommendation of a project implementation agency, a plant siting evaluation, infrastructure integration planning, source water characterization, economic impact and cost modeling, public outreach, analysis of concentrate management methods, evaluation of cost allocation strategies, evaluation and selection of a project procurement methodology.

Treatment Capacity:

According to the City of Corpus Christi's 2013 Water Conservation Plan (WCP), the O.N. Stevens Water Treatment Plant has a rated capacity of 167 million gallons per day, well above the peak summer demand of 110 million gallons per day. Additionally the City's 2013 WCP reports that the City treats approximately 25 billion gallons annually.

Regional Involvement:

South Texas Water Authority's district is located within the Region N Planning area and the Authority will be providing a copy of this updated Plan to the Region N Planning Group. South Texas Water Authority stays abreast of City of Corpus Christi and regional water issues through the Executive Director's participation as follows:

1. as the co-chair of the Coastal Bend Regional Water Planning Group;
2. as a member of the Nueces Estuary Advisory Committee; and

3. as a member of the Senate Bill 3 (in-stream needs) Committee also known as the Basin and Bay Stakeholder Committee (BBASC).

Measurement/Accounting and Monitoring/Record Management of Water:

All water is metered through a 16-inch meter as it leaves the O.N. Stevens Plant and enters the Authority's Regional System. Water is metered again as it enters the ground storage tanks servicing the Authority's seven (7) wholesale customers. Meters are read on the first day of the month for invoice purposes by field personnel. In addition, meter readings and flow volumes are recorded daily via a Supervisory Control and Data Acquisition (SCADA) system. A water loss report is calculated Monday through Friday by comparing recordings from the O.N. Stevens Plant against the cumulative of the Authority's wholesale customers. On average, the monthly water loss is less than two percent (2%). The Authority's goal is to keep the water loss rate below that level.

Leak Detection and Repair:

As mentioned in the previous section, all water is metered as it leaves the O.N. Stevens Plant and enters the Authority's Regional System. Water is metered again as it enters the ground storage tanks servicing the Authority's seven (7) wholesale customers. Meters are read on the first day of the month by field personnel, and meter readings and flow volumes are recorded daily via a Supervisory Control and Data Acquisition system (SCADA). A water loss report is calculated Monday through Friday by comparing recordings from the O.N. Stevens Plant against the cumulative of the Authority's wholesale customers. In addition to the daily water loss report and daily metering, the Authority periodically drives out the route of the line. A major portion of the Authority's Regional System's waterlines are located in rural farmlands; therefore, leaks that are not detected by employees are reported by landowners or tenant farmers. For those areas that are not located in cultivated fields, the Authority clears its right-of-way using leased equipment.

Leaks have been located as part of the Authority's cathodic protection program, which involves excavating the 42" transmission line to install sacrificial zinc anodes every 100 lineal feet. Master meters are tested annually by a consultant company specializing in testing larger meters. For deviations from 100% in a range of plus or minus 2%, the meter is re-calibrated. Meters are tested prior to the annual test date in the event the meter is slowing down in registering. Ground storage and elevated tanks are inspected annually. Cathodic protection systems are installed in the Kingsville and Bishop ground storage tanks. Tanks are refurbished every five years, or as needed, by interior and exterior cleaning, spot painting, or if needed complete repainting of the tank.

Reservoir Systems Operations Plan:

The Authority does not own or operate any reservoirs. The water wholesaled by the Authority is purchased from the City of Corpus Christi, the responsible entity overseeing those tasks.

Five-year and Ten-year targets:

Below are the FY 2015 per capita rates for the Authority’s seven (7) wholesale customers. These figures are based on STWA’s sales to these customers as well as information provided by the wholesale customers for self-supplied groundwater. The usage includes residential, commercial, institutional and industrial use. As shown below, the cities of Kingsville and Bishop use groundwater wells in addition to the water provided by the Authority. The remaining wholesale customers utilize the Authority for 100% of their water needs. Population figures are from the TWDB’s Water User Group Entity Detailed GPCD Report with the exception of the Nueces WSC population which is based on the number of connections in 2015 multiplied times three (3) and the Nueces County Water Control and Improvement District #5 (Banquete CDP, Texas) which is based on American Fact Finder, United States Census Bureau.

Table 2					
Entity	FY 2015 Purchased Volume	FY 2015 Self-supplied/ Adjustments	FY 2015 Total	FY 2015 Population	FY 2015 Per Capita Rate
Agua Dulce	24,933,970	0	24,933,970	830	82
Bishop	56,898,000	42,633,000	99,531,000	3,184	86
Driscoll	34,307,794	0	34,307,794	757	124
Kingsville	120,493,000	1,044,194,000	1,164,687,000	25,950	123
Nueces WSC (w/o Geo/IES)	175,033,576	31,554,000	143,479,576	2,670	147
• Geo Detention ¹	29,699,300				
• IES/KB Foundation ²	1,854,700				
NCWC&ID#5	25,285,240	0	25,285,240	726	95
Ricardo WSC	98,495,000	0	98,495,000	2,886	94

¹Geo is a detention center housing inmates for deportation.

²IES/KB Foundation is a detention center housing minors for possible deportation.

The Authority has no enforcement mechanism to impose conservation targets and goals upon its wholesale customers. The Authority will encourage its wholesale customers to educate its retail customers on the importance of water conservation in order to maintain a per capita gallon goal in the 140 to 145 gallon range. This figure closely correlates to the figure reported in the Texas Water Development Board’s Water Use of Texas Water Utilities, Report to the 84th Texas Legislature, January 2015, for Medium Utilities, Table 8. Average Water Use in Gallons Per Capita Daily, 2013 on page 20. According to Table 8 Medium Utilities Average Total Water Use – Gallons Per Capita Daily is 141 gallons.

Conservation Strategies:

(A) Conservation-Oriented Water Rates and Programs —South Texas Water Authority’s negotiated contracts with its wholesale customers provide for a water rate which includes a Handling Charge to recoup fixed costs, and a variable cost component to cover the cost of water purchased from Corpus Christi and other variable expenses. South Texas Water Authority does not have any retail customers; therefore, it does not have any conservation programs such as providing low flow devices or appliances.

- (B) South Texas Water Authority does not sell water to any agricultural customers; therefore, the Authority does not have any programs to assist agricultural customers in the development of conservation pollution prevention and abatement plans.
- (C) South Texas Water Authority does not provide wastewater service; therefore, it does not have any programs for reuse and/or recycling of wastewater and/or graywater.

The Authority recognizes that there are numerous factors involved in achieving these goals including educating customers, adoption of conservation oriented rates, and proper maintenance of infrastructure. As such, the Authority is actively involved in the Coastal Bend Regional Water Planning Group and the Nueces Estuary Advisory Council including the Bay Stakeholder Committee (BBASC) created as a result of Senate Bill 3. The Authority will continue to assist its wholesale customers through the following voluntary programs:

- Major Rivers
- Providing financial data for grant/loan applications
- Providing brochure and templates for conservation information

In addition, the Authority makes use of water-wise vegetation and crushed limestone landscaping and grounds keeping. The Authority will request that wholesale customers voluntarily report their progress on water conservation activities on an annual basis.

Water Supply Contracts:

South Texas Water Authority recognizes that a requirement in every water supply contract entered into or renewed after official adoption of the water conservation plan, and including any contract extension, stipulates that each successive wholesale customer develop and implement a water conservation plan or water conservation measures. In addition, the Authority recognizes that should the customer intend 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. Contracts or contract extensions will include those stipulations.

Implementation and Enforcement:

Enclosed is a copy of the resolution adopting The Water Conservation and Drought Contingency Plan attached as Appendix A.

Coordination With The Regional Water Planning Group:

Enclosed is a copy of the cover letter sent to the Nueces River Authority, administrator of the Coastal Bend Regional Water Planning Group, attached as Appendix B.

Review And Update:

South Texas Water Authority shall review and update its Water Conservation and Drought Contingency Plan, as appropriate, based on an assessment of previous five-year and ten-year targets and any other new or updated information. The original review occurred in May of 2009 and was scheduled for its next review in May of 2014. Instead, due to the extremely dry conditions of 2011, the plan was reviewed a year early in 2013. Now, in light of the City of Corpus Christi's updating of its Drought Contingency Plan, the Plan is being updated and will be revisited during the Summer of 2023.

PART II—DROUGHT CONTINGENCY PLAN

The following Part II of the Water Conservation and Drought Contingency Plan is based on South Texas Water Authority's Drought Contingency Plan adopted by Board resolution on August 26, 1999 updated to reflect changes made by the City of Corpus Christi to its drought contingency plan. Of particular importance are the changes to the trigger levels and accompanying restrictions. In addition, the allocation volumes have been recalculated to include the most recent data, located in Appendix C.

Section I: Declaration of Policy, Purpose and Intent

In order to conserve the available water supply and/or to protect the integrity of water supply facilities, with particular regard for domestic water use, sanitation, and fire protection, and to protect and preserve public health, welfare, and safety and minimize the adverse impacts of water supply shortage or other water supply emergency conditions, the South Texas Water Authority adopts the following Drought Contingency Plan, hereinafter referred to as the "Plan."

It is the intent that the Plan will:

- a) maintain in effect a drought contingency plan providing the information and direction required by the Texas Administrative Code, Title 30, Environmental Quality, Chapter 288, as these regulations may be amended or modified;
- b) facilitate the development of the specifics of a regional drought contingency plan in conjunction with the Coastal Bend Regional Water Planning Group and the regional water supplier, the City of Corpus Christi;
- c) assist the Authority's customers in development and implementation of plans.

Section II: Public Involvement

Opportunity for the public and wholesale water customers to provide input into the preparation of the Plan was provided by South Texas Water Authority by means of notice of a public meeting and certified letter to wholesale customers.

Section III: Wholesale Water Customer Education

The South Texas Water Authority will periodically provide wholesale water customers with information about the Plan, including information about the conditions under which each stage of the Plan is to be initiated or terminated and the drought response measures to be implemented in each stage. This information will be provided by means of email, regular mail and certified letters.

The South Texas Water Authority currently wholesales water to the cities of Agua Dulce, Bishop, Driscoll, Kingsville and the Nueces County Water Control and Improvement District #5 (Banquete), the Nueces Water Supply Corporation and the Ricardo Water Supply Corporation.

Section IV: Coordination with Regional Water Planning Groups

The water service area of the South Texas Water Authority is located within Region N and the South Texas Water Authority has provided a copy of the Plan to the Coastal Bend Regional Water Planning Group.

Section V: Authorization

The Executive Director, or his/her designee, is hereby authorized and directed to implement the applicable provisions of this Plan upon determination that such implementation is necessary to protect public health, safety, and welfare. The Executive Director, or his/her designee, shall have the authorization to initiate or terminate drought or other water supply emergency response measures as described in this Plan.

Section VI: Application

The provisions of this Plan shall apply to all customers utilizing water provided by the South Texas Water Authority. The terms person and customer as used in the Plan include individuals, corporations, partnerships, associations, and all other legal entities.

Section VII: Triggering Criteria for Initiation and Termination of Drought Response Stages

The Executive Director or his/her designee shall monitor water supply and/or demand conditions on a **weekly** basis and shall determine when conditions warrant initiation or termination of each stage of the Plan. Coordination with the City of Corpus Christi, the regional water supplier, will be required. Customer notification of the initiation or termination of drought response stages will be made by mail or telephone. The news media will also be informed.

The table below is based on limits as adopted by the Corpus Christi City Council.

Drought Stage Response	CCR/LCC Combined Reservoir Storage Level	Target Demand Reduction Levels
Stage 1 – Mild	<40% of CCR/LCC Combined Level	10%
Stage 2 – Severe	<30% of CCR/LCC Combined Level	15%
Stage 3 – Critical	<20% of CCR/LCC Combined Level	30%
Stage 4 – Emergency	Not Applicable	50%

(a) Stage 1 – Mild Water Shortage Conditions

Requirements for initiation – The South Texas Water Authority will declare and advise its wholesale customers that a mild water shortage condition exists when combined water stored in the reservoirs is estimated to be forty percent (40%) of total combined storage capacity of the Lake Corpus Christi/Choke Canyon Reservoirs is below 40%.

Requirements for termination – Stage 1 of the Plan may be rescinded when the combined storage capacity level of the LCC/CCR increases to above 50%. The South Texas Water Authority will notify its wholesale customers and the media of the termination of Stage 1 in the same manner as the notification of initiation of Stage 1 of the Plan.

b) Stage 2 – Moderate Water Shortage Conditions

Requirements for initiation – The South Texas Water Authority will declare and advise its wholesale customers that a moderate water shortage condition exists when the combined storage capacity of the Lake Corpus Christi/Choke Canyon Reservoirs is less than 30%.

Requirements for termination – Stage 2 of the Plan may be rescinded when the combined storage capacity level of the LCC/CCR increases to above 40%. Upon termination of Stage 2, Stage 1 becomes operative. The South Texas Water Authority will notify its wholesale customers and the media of the termination of Stage 2 in the same manner as the notification of initiation of Stage 1 of the Plan, if applicable.

c) Stage 3 – Critical Water Shortage Conditions

Requirements for initiation – The South Texas Water Authority will declare and advise its wholesale customers that a critical water shortage condition exists when the combined storage capacity of the Lake Corpus Christi/Choke Canyon Reservoirs is less than 20% of total storage capacity.

Requirements for termination – Stage 3 of the Plan may be rescinded when the combined storage capacity level of the LCC/CCR increases to above 30%. Upon termination of Stage 3, Stage 2 becomes operative. The South Texas Water Authority will notify its wholesale customers and the media of the termination of Stage 3 in the same manner as the notification of Stage 2 initiation, if applicable.

(e) Stage 4 – Emergency Water Shortage Conditions

Requirements for initiation – South Texas Water Authority will declare and advise its wholesale customers that an emergency water shortage condition exists in the event of:

- a) A major water line break or breaks and/or pump station failures, whether owned and operated by South Texas Water Authority or the City of Corpus Christi, which cause unprecedented loss of capability to provide water service, or
- b) Water production limitations associated with the City of Corpus Christi's water treatment facilities, or
- c) A natural or man-made contamination of the water supply source(s).

Requirements for termination – Stage 4 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist and are rescinded by the Corpus Christi City Manager or South Texas Water Authority Executive Director, whoever is applicable.

Section VIII: Drought Response Stages

The Executive Director, or his/her designee, shall monitor water supply and/or demand conditions and, in accordance with the triggering criteria set forth in Section VII, shall determine that mild, moderate, severe or critical water shortage conditions exist, as established by the City of Corpus Christi, or that an emergency condition exists and shall implement the following actions:

Stage 1 – Mild Water Shortage Conditions

1. Goal: achieve a ten percent (10%) reduction as requested by the City of Corpus Christi.
2. Supply Management Measures. Request that wholesale customers consider implementation of the following regulations or prohibitions:
 - a) Irrigation of landscaped areas with hose-end sprinklers or automatic irrigation systems shall be limited to **once per week**. Irrigation of landscaped areas could be permitted on any day if it is by means of a hand-held hose (with positive shutoff nozzle), a faucet filled bucket or watering can of five (5) gallons or less, or drip irrigation system with a positive shutoff device. The City of Corpus Christi's watering schedule will be determined by the Corpus Christi City Manager or his/her designee. South Texas Water Authority will provide that information to its wholesale customers and recommend that similar, if unable to adopt identical, schedules be adopted. The Authority also recommends that exceptions for this restriction be permitted, upon review and approval by a Water Allocation and Review Committee appointed by the wholesale customer's governing body. Exceptions for consideration can include: new plantings – for up to 60 days, vegetable gardens, athletic playing fields and botanical gardens. Wholesale customers may also consider adopting an exemption (whereby this restriction does not apply) to their retail customers irrigating with well water or an aerobic septic system. The Authority recommends that its wholesale customers adopt a permitting process for this exemption including the issuance of a posted permit to be prominently displayed on the premises and visible within two (2) feet of the premise's address.
 - b) Use of water from hydrants shall be limited to fire fighting, related activities, or other activities necessary to maintain public health, safety, and welfare, except that use of water from designated fire hydrants for construction purposes may be allowed under special permit from the wholesale customer or wholesale customer's water department.
 - c) Use of water for the irrigation of golf course greens, tees, and fairways is prohibited except on designated watering days. However, if the golf course utilizes a water source other than that provided from the City of Corpus Christi's regional supply, the facility will not be subject to this restriction, unless it is a separate requirement of the wholesale customer.

- d) Use of water to maintain the integrity of building foundations is limited to designated watering days and is only permitted by use of hand held hose or drip irrigation.

3. Demand Management Measures:

- a) The Executive Director, or his/her designee(s) will initiate contact with wholesale water customers as needed to discuss water supply and/or demand conditions and the possibility of pro rata curtailment of water diversions and/or deliveries.
- b) The Executive Director, or his/her designee(s), will request wholesale water customers to initiate mandatory measures to reduce non-essential water use.
- c) The Executive Director, or his/her designee(s), will initiate preparations for the implementation of pro rata curtailment of water diversions and/or deliveries by preparing a monthly water usage allocation baseline for each wholesale customer according to the procedures specified in Section IX of the Plan.
- d) The Executive Director, or his/her designee(s), will provide reports as needed to the City of Corpus Christi with information regarding current wholesale customer usage.

Stage 2 –Moderate Water Shortage Conditions

1. Goal: achieve a fifteen percent (15%) reduction as requested by the City of Corpus Christi.
2. Supply Management Measures. South Texas Water Authority will advise its wholesale customers to continue in full force with restrictions set forth in Stage 1. In addition, request that wholesale customers consider implementation of the following additional regulations or prohibitions:
 - a) Eliminate the flushing of water mains unless required for decontamination and/or public safety.
 - b) Review their retail customers' water usage for compliance of the 15% reduction based on the previous month's water use and notify violators verbally or in writing as the situation dictates.
 - c) Irrigation of landscaped areas shall be limited to **once every other week**. The City of Corpus Christi's watering schedule will be determined by the Corpus Christi City Manager or his/her designee. South Texas Water Authority will provide that information to its wholesale customers and recommend that similar, if unable to adopt identical, schedules be adopted. The Authority will also recommend that exceptions for this restriction be permitted, upon review and approval by a Water Allocation and Review Committee appointed by the wholesale customer's governing body. Exceptions for consideration can include: new plantings – for up to 60 days, vegetable gardens, athletic playing fields and botanical gardens. Wholesale customers may also consider adopting an exemption (whereby this restriction does not apply) to their retail customers irrigating with well water or an aerobic septic system. The Authority recommends that its wholesale customers adopt a permitting process for this exemption including the issuance of a posted permit to be

prominently displayed on the premises and visible within two (2) feet of the premise's address.

- d) Irrigation of landscaped areas is permitted on any day if it is by means of a hand-held hose with positive shutoff nozzle, a faucet filled bucket or watering can of five (5) gallons or less, or drip irrigation system with a positive shutoff device.
 - e) The watering of golf course fairways is prohibited. Watering of greens and tees is limited to once every other week unless the golf course utilizes a water source other than that provided from the City of Corpus Christi's regional supply or if done by means of hand-held hoses, hand-held buckets, or drip irrigation and at the discretion of the wholesale customer's governing body.
 - f) In addition, the City of Corpus Christi may implement a drought surcharge for its residential and multi-unit customers to deter discretionary use of water. According to the City's Plan, the surcharge may be up to and including 100% of the current water rate added to the customer's bill.
 - g) South Texas Water Authority understands that its wholesale customers have their own budgetary needs and have the potential to face shortfalls as a result of decreased sales. In addition, South Texas Water Authority will be charged surcharges by the City of Corpus Christi for exceeding the calculated allocations. These surcharges will be collected from each wholesale customer that exceeds its allocation in accordance with Section IX of this Plan.
3. The Executive Director, or his/her designee(s), will provide reports as needed to the City of Corpus Christi with information regarding current wholesale customer usage.

Stage 3 – Critical Water Shortage Conditions

1. Goal: achieve a thirty percent (30 %) reduction as requested by the City of Corpus Christi.
2. Supply Management Measures. South Texas Water Authority will advise its wholesale customers to continue in full force with restrictions set forth in Stage 2. In addition, request that wholesale customers consider implementation of the following additional regulations or prohibitions:
 - a) Upon written notice, disconnect the water meters of willful violators if absolutely necessary to prevent the deliberate wasting of water.
 - b) Irrigation of landscaped areas shall be **prohibited at all times**.
 - c) Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane, or other vehicle not on the premises of a commercial car wash station and not in the immediate interest of public health, safety, and welfare is prohibited.
 - d) Use of water to fill, refill, or add to any indoor or outdoor swimming pools, wading pools, or Jacuzzi-type pools and water parks, unless the source of water is a non-city, alternative source is prohibited.

- e) Use of water to maintain the integrity of building foundations is still permitted on the designated Stage 2 watering day and is only permitted by use of hand held hose or drip irrigation.
 - h) An additional measure at the discretion of the governing body is to disallow any applications for new, additional, expanded, or increase in size water service connections, meters, service lines, pipeline extensions, mains, or water service facilities of any kind.
 - i) In addition, the City of Corpus Christi may implement a drought surcharge for its residential and multi-unit customers to deter discretionary use of water. According to the City's Plan, the surcharge may be up to and including 100% of the current water rate added to the customer's bill.
 - j) South Texas Water Authority understands that its wholesale customers have their own budgetary needs and have the potential to face shortfalls as a result of decreased sales. In addition, South Texas Water Authority will be charged surcharges by the City of Corpus Christi for exceeding the calculated allocations. These surcharges will be collected from each wholesale customer that exceeds its allocation in accordance with Section IX of this Plan.
3. The Executive Director, or his/her designee(s), will provide reports as needed to the City of Corpus Christi with information regarding current wholesale customer usage.

Stage 4 – Emergency Water Shortage Conditions

Whenever emergency water shortage conditions exist as defined in Section VII of the Plan, the Executive Director shall:

1. Assess the severity of the problem and identify the actions needed and time required to solve the problem.
2. Inform the utility director or other responsible official of each wholesale water customer by telephone or in person and suggest actions, as appropriate, to alleviate problems.
3. If appropriate, notify city, county, and/or state emergency response officials for assistance.
4. Undertake necessary actions, including repairs and/or cleanup as needed. These actions shall include but not be limited to activating the emergency 4" waterline interconnection between the Nueces Water Supply Corporation's distribution system and the Nueces Water Control and Improvement District #5, use of tankard water trucks and hauling water from nearby systems such as the City of Alice and the City of Corpus Christi (if the emergency is not as a result of the City's own emergency), requesting the City of Agua Dulce to activate their groundwater well, requesting the City of Bishop to utilize its groundwater well for a larger percentage of its needs and requesting the City of Kingsville to utilize its groundwater wells for 100% of its water needs.

5. Prepare a post-event assessment report on the incident and critique of emergency response procedures and action.

Section IX: Pro Rata Water Allocation

In the event that the triggering criteria specified in Section VII of the Plan for Stage 3– Critical Water Shortage Conditions have been met, the Executive Director is hereby authorized to initiate allocation of water supplies on a pro rata basis in accordance with Texas Water Code Section 11.039 and according to the following water allocation policies and procedures:

- (a) A wholesale customer’s monthly allocation shall be a percentage of the customer’s water usage baseline. The percentage will be set by resolution of the Board of Directors based on the Executive Director’s assessment of the severity of the water shortage condition and the need to curtail water diversions and/or deliveries and may be adjusted periodically by resolution of the Board of Directors as conditions warrant. Once pro rata allocation is in effect, water diversions by or deliveries to each wholesale customer shall be limited to the allocation established for each month.
- (b) A monthly water usage allocation shall be established by the Executive Director, or his/her designee, for each wholesale customer. The wholesale customer’s water usage baseline will be computed on the average water usage by month for the last five (5) year period as shown in the example given below. If the wholesale water customer’s billing history is less than five (5) years, the monthly average for the period for which there is a record shall be used for any monthly period for which no billing history exists.

Example Calculation of Monthly Allocation for a Hypothetical Wholesale Water Customer

	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	SUM	AVE	Allocation Percentage	Monthly Allocation
Oct	133	137	146	148	156	720	144	70%	101
Nov	115	122	133	133	147	650	130	70%	91
Dec	130	150	146	149	159	734	147	70%	103
Jan	130	167	168	157	187	809	162	70%	113
Feb	160	152	179	183	171	845	169	70%	118
Mar	226	184	172	215	249	1,046	209	70%	145
Apr	235	274	232	314	246	1,301	260	70%	182
May	222	203	206	337	309	1,277	255	70%	179
June	199	160	196	229	198	982	196	70%	137
July	165	172	197	165	185	884	177	70%	124
Aug	139	142	149	153	162	745	149	70%	104
Sep	142	143	150	156	165	756	151	70%	106
	1,996	2,006	2,074	2,339	2,334		2,149		1,503

UNITS IN 1,000 gallons

- (c) The Executive Director shall provide notice, by certified mail, to each wholesale customer informing them of their monthly water usage allocations and shall notify the City of Corpus Christi and the executive director of the Texas Commission on Environmental Quality upon initiation of pro rata water allocation.

- (d) Upon request of the customer or at the initiative of the Executive Director, the allocation may be reduced or increased if, (1) the designated period does not accurately reflect the wholesale customer's normal water usage; (2) the customer agrees to transfer part of its allocation to another wholesale customer; or (3) other objective evidence demonstrates that the designated allocation is inaccurate under present conditions. A customer may appeal an allocation established hereunder to the Board of Directors of the South Texas Water Authority.

Section X: Enforcement

During any period when pro rata allocation of available water supplies is in effect, South Texas Water Authority shall pay surcharges according to the City of Corpus Christi's Drought Contingency Plan, Sections 16.9 (Pro Rata Water Allocation) and 16.10 (Pro Rata Surcharges and Enforcement) which reads as follows:

In the event that the triggering criteria specified in Section 16.7 of the [City of Corpus Christi's] Plan for Stage 4 3 have been met, the City of Corpus Christi City Manager, or designee, is hereby authorized to implement allocation of water supplies on a pro rata basis to raw water and treated wholesale customers in accordance with the Texas Water Code §11.039. The initiation of pro rata allocation preparations shall begin during Stage 3 2. A provision will be included in every wholesale water contract entered into or renewed after adoption of the plan, including contract extensions, that in case of a shortage of water resulting from drought, the water to be distributed shall be divided in accordance with Texas Water Code §11.039.

- (1) A raw water or wholesale treated water customer's monthly allocation shall be a percentage of the customer's water usage baseline. The percentage will be set by resolution of the City Council based on the City Manager's assessment of the severity of the water shortage condition and the need to curtail water diversions and deliveries, and may be adjusted periodically by resolution of the City Council as conditions warrant. Once pro rata allocation is in effect, water diversions by or deliveries to each raw water or wholesale treated water customer shall be limited to the allocation established for each month.*
- (2) A monthly water usage allocation shall be established by the City Manager, or the City Manager's designee, for each raw water or wholesale treated water customer. The raw water or wholesale treated water customer's water usage baseline will be computed on the average water usage by month for the previous five-year period. If the raw water or wholesale treated water customer's billing history is less than five (5) years, the monthly average for the period for which there is a record shall be used for any monthly period for which no billing history exists.*
- (3) The City Manager shall provide notice, by certified mail, to each raw water or wholesale treated water customer informing them of their monthly water usage allocations and shall notify the news media and the Executive Director of the Texas Commission on Environmental Quality upon initiation of pro rata water allocation.*
- (4) Upon request of the raw water or wholesale treated water customer or at the initiative of the City Manager, the allocation may be reduced or increased if:
 - a. The designated period does not accurately reflect the raw water or wholesale treated water customer's normal water usage;**

- b. *The customer agrees to transfer part of its allocation to another raw water or wholesale treated water customer; or*
- c. *Other objective evidence demonstrates that the designated allocation is inaccurate under present conditions. A customer may appeal allocation established under this section to the City Council of the City of Corpus Christi.*

During any period when pro rata allocation of available water supplies is in effect, wholesale customers shall pay the following surcharges on excess water diversions:

- *2.0 times the normal water rate per unit in excess of the monthly allocation up through 5 percent above the monthly allocation.*
- *2.5 times the normal water rate in excess of the monthly allocation from 5 percent through 10 percent above the monthly allocation.*
- *3.0 times the normal water rate in excess of the monthly allocation from 10 percent through 15 percent above the monthly allocation.*
- *3.5 times the normal water rate more than 15 percent above the monthly allocation.*

Any surcharges assessed against South Texas Water Authority by the City of Corpus Christi will be charged on a pro rata basis to the Authority's wholesale customers that have exceeded their monthly allocation calculated in accordance with Section IX.

Section XI: Variances

The Executive Director, or his/her designee, may, in writing, grant a temporary variance to the pro rata water allocation policies provided by this Plan if it is determined that failure to grant such variance would cause an emergency condition adversely affecting the public health, welfare, or safety and if one or more of the following conditions are met:

- (a) Compliance with this Plan cannot be technically accomplished during the duration of the water supply shortage or other condition for which the Plan is in effect.
- (b) Alternative methods can be implemented which will achieve the same level of reduction in water use.

Wholesale customers requesting an exemption from the provisions of this Plan shall file a petition for variance with the Executive Director within five (5) days after pro rata allocation has been invoked. All petitions for variances shall be reviewed by the Board of Directors, and shall include the following:

- (a) Name and address of the petitioner(s).
- (b) Detailed statement with supporting data and information as to how the pro rata allocation of water under the policies and procedures established in the Plan adversely affects the petitioner or what damage or harm will occur to the petitioner or others if petitioner complies with this Plan.
- (c) Description of the relief requested.
- (d) Period of time for which the variance is sought.

- (e) Alternative measures the petitioner is taking or proposes to take to meet the intent of this Plan and the compliance date.
- (f) Other pertinent information.

Variances granted by the Board of Directors shall be subject to restrictions placed on the South Texas Water Authority by the City of Corpus Christi and the following conditions, unless waived or modified by the Board of Directors or its designee:

- (a) Variances granted shall include a timetable for compliance.
- (b) Variances granted shall expire when the Plan is no longer in effect, unless the petitioner has failed to meet specified requirements.

No variance shall be retroactive or otherwise justify any violation of this Plan occurring prior to the issuance of the variance.

Section XII: Severability

It is hereby declared to be the intention of the Board of Directors that the sections, paragraphs, sentences, clauses, and phrases of this Plan are severable and, if any phrase, clause, sentence, paragraph, or section of this Plan shall be declared unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs, and sections of this Plan, since the same would not have been enacted by the Board of Directors without the incorporation into this Plan of any such unconstitutional phrase, clause, sentence, paragraph, or section.