

# APPENDIX A

WATER CONSERVATION AND  
DROUGHT CONTINGENCY PLANS-  
CALHOUN PROJECT PARTICIPANTS



## WATER CONSERVATION PLAN GUIDANCE CHECKLIST

This guidance checklist applies to all Texas Water Development Board (TWDB) Financial Assistance Programs specified in its rules under Texas Administrative Code 31, Chapters 355, 363, 371, 375, 382, and 384. **The TWDB will accept Water Conservation Plans determined by the Texas Commission on Environmental Quality (TCEQ) to satisfy the requirements of 30 TAC Chapter 288.**

Basically, *the water conservation plan* is a strategy or combination of strategies for reducing the consumption of water, reducing the loss or waste of water, improving or maintaining the efficiency in the use of water, or increasing recycling and reuse of water. It contains best management practices measures to try to meet the targets and goals identified in the plan. *The Drought Contingency (Emergency Demand Management) Plan* is a strategy or combination of strategies for responding to temporary and potentially recurring water supply shortages and other supply emergencies.

### THE WATER CONSERVATION PLAN REQUIREMENTS:

**A. \_\_\_\_\_** An evaluation of the Applicant's water and wastewater system and customer use characteristics to identify water conservation opportunities and potential targets and goals. Completion of the ***Water Conservation Utility Profile, WRD-264***, as part of the evaluation is required. Attach it to the Plan.

**B. \_\_\_\_\_** **Inclusion of 5-year and 10 –year targets & goals.** Target and goals should be specific and quantified for municipal use expressed in gallons per capita per day (gpcd) as well as goals for water loss programs. Consider state and regional targets and goals, local climate, demographics, and the utility profile. Consider the anticipated savings that can be achieved by utilizing the appropriate Best Management Practices and other conservation techniques.

**C. \_\_\_\_\_** A schedule for implementing the plan to achieve the applicant's targets and goals.

**D. \_\_\_\_\_** A method for tracking the implementation and effectiveness of the plan. The method should track annual water use and provide information sufficient to evaluate the implementation conservation measures. The plan should measure progress annually, and, at a minimum, evaluate the progress towards meeting the targets and goals every five years.

**E. \_\_\_\_\_** A master meter to measure and account for the amount of water diverted from the source of supply.

**F. \_\_\_\_\_** A program of universal metering of both customer and public uses of water, for meter testing, repair and for periodic replacement.

**G. \_\_\_\_\_** Measures to determine and control unaccounted-for uses of water. (for example, periodic visual inspections along distribution lines; annual or monthly audit of the water system to determine illegal connections, abandoned services, etc.)

**H. \_\_\_\_\_** A continuous program of leak detection, repair, and water loss accounting for the water transmission, delivery, and distribution system in order to control water loss.

**I. \_\_\_\_\_** A program of continuing education and information regarding water conservation. This should include providing water conservation information directly to each residential, industrial and commercial customer annually, and providing water conservation literature to new customers when they apply for service.

**J. \_\_\_\_\_** 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. Include copy of the rate structure.

**K. \_\_\_\_\_** A means of implementation and enforcement which shall be evidenced by adoption of the plan:

1. a copy of the ordinance, resolution, or tariff indicating official adoption of the water conservation plan by the applicant and
2. a description of the authority by which the applicant will implement and enforce the conservation plan.

**L. \_\_\_\_\_** If the Applicant will utilize the project financed by the TWDB to furnish water or wastewater services to another supplying entity that in turn will furnish the water or wastewater services to the ultimate consumer, the requirements for the water conservation plan also pertain to these supplier entities.

To comply with this requirement the applicant shall:

1. submit its own water conservation plan;
2. submit the other entity’s (or entities) water conservation plan;
3. require, by contract, that the other entity (or entities), adopt a water conservation plan that conforms to the board’s requirement and submit it to the board. If the requirement is to be included in an existing water or wastewater service contract, it may be included, at the earliest of the renewal or substantial amendment of that contract, or by other appropriate measures.

**M. \_\_\_\_\_** Documentation that the regional water planning group for the service area of the applicant has been notified of the applicant’s water conservation plan.

**Note:** The water conservation plan may also include other conservation method or technique that the applicant deems appropriate.

**N. The Drought Contingency Plan shall include:**

1. \_\_\_\_\_ **Trigger conditions.** Describe information to be monitored. For example, reservoir levels, daily water demand, water production or distribution system limitations. Supply source contamination and system outage or equipment failure should be considered too. Determine specific quantified targets of water use reduction.
2. \_\_\_\_\_ **Demand management measures.** Refers to actions that will be implemented by the utility during each stage of the plan when predetermined triggering criteria are met. **Drought plans must include quantified and specific targets for water use reductions to be achieved during periods of water shortage and drought.** Supply management measures typically can be taken by the utility to better manage available water supply, as well as the use of backup or alternative water sources. The demand management measures should curtail nonessential water uses, for example, outdoor water use.
3. \_\_\_\_\_ **Initiation and termination procedures.** The drought plan must include specific procedures to be followed for the initiation or termination of each drought response stage, including procedures for notification of the public.
4. \_\_\_\_\_ **Variances and enforcement.** The plans should specify procedures for considering (approving and denying) variances to the plan. Equally as important is the inclusion of provisions for enforcement of any mandatory water use restrictions, including specification of penalties for violations of such restrictions.
5. \_\_\_\_\_ **Measures to inform and educate the public.** Involving the public in the preparation of the drought contingency plan provides an important means for educating the public about the need for the plan and its content.

0. \_\_\_\_\_ **Adopt the plan.** No plan is complete without formal adoption by the governing body of the entity. For a municipal water system, adoption would be by the city council as an ordinance, or a resolution by an entity's board of directors.

P. \_\_\_\_ **Reporting Requirement:** Identify who will be responsible for preparing the annual report on the utility profile form WRD-264. Loan/Grant Recipients must maintain an approved water conservation program in effect until all financial obligations to the state have been discharged and shall **report annually** to the executive administrator of the TWDB on the progress in implementing each of the minimum requirements in its water conservation plan and the status of any of its customers' water conservation plan required by contract, within one year after closing on the financial assistance and annually thereafter. The content and format for the annual reporting is included in the form: ***Water Conservation Program Annual Report, WRD-265.***

**Assistance:** For information and assistance contact:

**Adolph L. Stickelbault** ([adolph.stickelbault@twdb.state.tx.us](mailto:adolph.stickelbault@twdb.state.tx.us))  
**Texas Water Development Board**  
**PO Box 13231**  
**Austin, Texas 78711-3231**  
**512-936-2391**

Municipal Plan Assistance and Forms:

<http://www.twdb.state.tx.us/assistance/conservation/Municipal/Plans/CPlans.asp>

Best Management Practices Information:

<http://www.twdb.state.tx.us/assistance/conservation/TaskForceDocs/WCITFBMPGuide.pdf>

Quantification Techniques:

<http://www.twdb.state.tx.us/assistance/conservation/gdsstudy.asp>



# **Drought Contingency Plan for a Retail Public Water Supplier**

Texas Commission on Environmental Quality

Instructions: The following form is a model of a drought contingency plan for a retail public water supplier. Not all items may apply to your system's situation. This form is supplied for your convenience, but you are not required to use this form to submit your plan to the TCEQ. Submit completed plans to: Water Supply Division MC 160, TCEQ, P.O. Box 13087, Austin TX 78711-3087.

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**(Name of Utility)**

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**(Address, City, Zip Code)**

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**(CCN#)**

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**(PWS #s)**

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**(Date)**

## **Section I: Declaration of Policy, Purpose, and Intent**

In order to conserve the available water supply and 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 \_\_\_\_\_ (name of your water supplier) hereby adopts the following regulations and restrictions on the delivery and consumption of water through an ordinance/or resolution (see Appendix C for an example).

Water uses regulated or prohibited under this Drought Contingency Plan (the Plan) are considered to be non-essential and continuation of such uses during times of water shortage or other emergency water supply condition are deemed to constitute a waste of water which subjects the offender(s) to penalties as defined in Section XI of this Plan.

## **Section II: Public Involvement**

Opportunity for the public to provide input into the preparation of the Plan was provided by the \_\_\_\_\_ (name of your water supplier) by means of \_\_\_\_\_ (describe methods used to inform the public about the preparation of the plan and provide opportunities for input; for example, scheduling and providing public notice of a public meeting to accept input on the Plan).

## **Section III: Public Education**

The \_\_\_\_\_ (name of your water supplier) will periodically provide the public 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 \_\_\_\_\_ (describe methods to be used to provide information to the public about the Plan; for example, public events, press releases or utility bill inserts).

## **Section IV: Coordination with Regional Water Planning Groups**

The service area of the \_\_\_\_\_ (name of your water supplier) is located within the \_\_\_\_\_ (name of regional water planning area or areas) and \_\_\_\_\_ (name of your water supplier) has provided a copy of this Plan to the \_\_\_\_\_ (name of your regional water planning group or groups).

## **Section V: Authorization**

The \_\_\_\_\_ (designated official; for example, the mayor, city manager, utility director, general manager, etc.), 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 \_\_\_\_\_, (designated official) or his/her designee, shall have the authority 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 persons, customers, and property utilizing water provided by the \_\_\_\_\_ (name of your water supplier). The terms “person” and “customer” as used in the Plan include individuals, corporations, partnerships, associations, and all other legal entities.



## Section VII: Definitions

For the purposes of this Plan, the following definitions shall apply:

Aesthetic water use: water use for ornamental or decorative purposes such as fountains, reflecting pools, and water gardens.

Commercial and institutional water use: water use which is integral to the operations of commercial and non-profit establishments and governmental entities such as retail establishments, hotels and motels, restaurants, and office buildings.

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 supply is conserved and made available for future or alternative uses.

Customer: any person, company, or organization using water supplied by \_\_\_\_\_ (name of your water supplier).

Domestic water use: water use for personal needs or for household or sanitary purposes such as drinking, bathing, heating, cooking, sanitation, or for cleaning a residence, business, industry, or institution.

Even number address: street addresses, box numbers, or rural postal route numbers ending in 0, 2, 4, 6, or 8 and locations without addresses.

Industrial water use: the use of water in processes designed to convert materials of lower value into forms having greater usability and value.

Landscape irrigation use: water used for the irrigation and maintenance of landscaped areas, whether publicly or privately owned, including residential and commercial lawns, gardens, golf courses, parks, and rights-of-way and medians.

Non-essential water use: water uses that are not essential nor required for the protection of public, health, safety, and welfare, including:

- (a) irrigation of landscape areas, including parks, athletic fields, and golf courses, except otherwise provided under this Plan;
- (b) use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle;
- (c) use of water to wash down any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas;
- (d) use of water to wash down buildings or structures for purposes other than immediate fire protection;
- (e) flushing gutters or permitting water to run or accumulate in any gutter or street;
- (f) use of water to fill, refill, or add to any indoor or outdoor swimming pools or jacuzzi-type pools;

- (g) use of water in a fountain or pond for aesthetic or scenic purposes except where necessary to support aquatic life;
- (h) failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s); and
- (i) use of water from hydrants for construction purposes or any other purposes other than fire fighting.

Odd numbered address: street addresses, box numbers, or rural postal route numbers ending in 1, 3, 5, 7, or 9.

## **Section VIII: Criteria for Initiation and Termination of Drought Response Stages**

The \_\_\_\_\_ (designated official) or his/her designee shall monitor water supply and/or demand conditions on a \_\_\_\_\_ (example: daily, weekly, monthly) basis and shall determine when conditions warrant initiation or termination of each stage of the Plan, that is, when the specified “triggers” are reached.

The triggering criteria described below are based on \_\_\_\_\_

*(provide a brief description of the rationale for the triggering criteria; for example, triggering criteria / trigger levels based on a statistical analysis of the vulnerability of the water source under drought of record conditions, or based on known system capacity limits).*

### **Stage 1 Triggers -- MILD Water Shortage Conditions**

#### Requirements for initiation

Customers shall be requested to voluntarily conserve water and adhere to the prescribed restrictions on certain water uses, defined in Section VII–Definitions, when

\_\_\_\_\_  
*(describe triggering criteria / trigger levels; see examples below).*

*Following are examples of the types of triggering criteria that might be used in one or more successive stages of a drought contingency plan. One or a combination of such criteria must be defined for each drought response stage, but usually not all will apply. Select those appropriate to your system:*

*Example 1: Annually, beginning on May 1 through September 30.*

*Example 2: When the water supply available to the \_\_\_\_\_ (name of your water supplier) is equal to or less than \_\_\_\_\_ (acre-feet, percentage of storage, etc.).*

*Example 3: When, pursuant to requirements specified in the \_\_\_\_\_ (name of **your** water supplier) wholesale water purchase contract with \_\_\_\_\_ (name*

*of your wholesale water supplier), notification is received requesting initiation of Stage 1 of the Drought Contingency Plan.*

*Example 4: When flows in the \_\_\_\_\_ (name of stream or river) are equal to or less than \_\_\_\_\_ cubic feet per second.*

*Example 5: When the static water level in the \_\_\_\_\_ (name of your water supplier) well(s) is equal to or less than \_\_\_\_\_ feet above/below mean sea level.*

*Example 6: When the specific capacity of the \_\_\_\_\_ (name of your water supplier) well(s) is equal to or less than \_\_\_\_\_ percent of the well's original specific capacity.*

*Example 7: When total daily water demand equals or exceeds \_\_\_\_\_ million gallons for \_\_\_\_\_ consecutive days of \_\_\_\_\_ million gallons on a single day (example: based on the "safe" operating capacity of water supply facilities).*

*Example 8: Continually falling treated water reservoir levels which do not refill above \_\_\_\_\_ percent overnight (example: based on an evaluation of minimum treated water storage required to avoid system outage).*

*The public water supplier may devise other triggering criteria which are tailored to its system.*

#### Requirements for termination

Stage 1 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of \_\_\_\_ (e.g. 3) consecutive days.

### **Stage 2 Triggers -- MODERATE Water Shortage Conditions**

#### Requirements for initiation

Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses provided in Section IX of this Plan when \_\_\_\_\_ (describe triggering criteria; see examples in Stage 1).

#### Requirements for termination

Stage 2 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of \_\_\_\_ (example: 3) consecutive days. Upon termination of Stage 2, Stage 1 becomes operative.

### **Stage 3 Triggers – SEVERE Water Shortage Conditions**

#### Requirements for initiation

Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses for Stage 3 of this Plan when \_\_\_\_\_ (describe triggering criteria; see examples in

Stage 1).

Requirements for termination

Stage 3 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of \_\_\_\_ (example: 3) consecutive days. Upon termination of Stage 3, Stage 2 becomes operative.

**Stage 4 Triggers -- CRITICAL Water Shortage Conditions**

Requirements for initiation

Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses for Stage 4 of this Plan when \_\_\_\_\_ (*describe triggering criteria; see examples in Stage 1*).

Requirements for termination

Stage 4 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of \_\_\_\_ (example: 3) consecutive days. Upon termination of Stage 4, Stage 3 becomes operative.

**Stage 5 Triggers -- EMERGENCY Water Shortage Conditions**

Requirements for initiation

Customers shall be required to comply with the requirements and restrictions for Stage 5 of this Plan when \_\_\_\_\_ (designated official), or his/her designee, determines that a water supply emergency exists based on:

1. Major water line breaks, or pump or system failures occur, which cause unprecedented loss of capability to provide water service; **or**
2. Natural or man-made contamination of the water supply source(s).

Requirements for termination

Stage 5 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of \_\_\_\_ (example: 3) consecutive days.

**Stage 6 Triggers -- WATER ALLOCATION**

Requirements for initiation

Customers shall be required to comply with the water allocation plan prescribed in Section IX of this Plan and comply with the requirements and restrictions for Stage 5 of this Plan when \_\_\_\_\_ (*describe triggering criteria, see examples in Stage 1*).

Requirements for termination - Water allocation may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of \_\_\_\_ (example: 3) consecutive days.

*Note: The inclusion of WATER ALLOCATION as part of a drought contingency plan may not be required in all cases. For example, for a given water supplier, an analysis of water supply availability under drought of record conditions may indicate that there is essentially no risk of water supply shortage. Hence, a drought contingency plan for such a water supplier might only address facility capacity limitations and emergency conditions (example: supply source contamination and system capacity limitations).*

## **Section IX: Drought Response Stages**

The \_\_\_\_\_ (designated official), or his/her designee, shall monitor water supply and/or demand conditions on a daily basis and, in accordance with the triggering criteria set forth in Section VIII of this Plan, shall determine that a mild, moderate, severe, critical, emergency or water shortage condition exists and shall implement the following notification procedures:

### **Notification**

#### Notification of the Public:

The \_\_\_\_\_ (designated official) or his/ her designee shall notify the public by means of:

*Examples:*  
*publication in a newspaper of general circulation,*  
*direct mail to each customer,*  
*public service announcements,*  
*signs posted in public places*  
*take-home fliers at schools.*

#### Additional Notification:

The \_\_\_\_\_ (designated official) or his/ her designee shall notify directly, or cause to be notified directly, the following individuals and entities:

*Examples:*  
*Mayor / Chairman and members of the City Council / Utility Board*  
*Fire Chief(s)*  
*City and/or County Emergency Management Coordinator(s)*  
*County Judge & Commissioner(s)*  
*State Disaster District / Department of Public Safety*  
*TCEQ (required when mandatory restrictions are imposed)*  
*Major water users*

*Critical water users, i.e. hospitals  
Parks / street superintendents & public facilities managers*

*Note: The plan should specify direct notice only as appropriate to respective drought stages.*

## **Stage 1 Response -- MILD Water Shortage Conditions**

**Target: Achieve a voluntary \_\_\_\_ percent reduction in \_\_\_\_ (example: total water use, daily water demand, etc.).**

**Best Management Practices for Supply Management:**

*Describe additional measures, if any, to be implemented directly by (name of your water supplier) to manage limited water supplies and/or reduce water demand. Examples include: reduced or discontinued flushing of water mains, activation and use of an alternative supply source(s); use of reclaimed water for non-potable purposes.*

**Voluntary Water Use Restrictions for Reducing Demand :**

- (a) Water customers are requested to voluntarily limit the irrigation of landscaped areas to Sundays and Thursdays for customers with a street address ending in an even number (0, 2, 4, 6 or 8), and Saturdays and Wednesdays for water customers with a street address ending in an odd number (1, 3, 5, 7 or 9), and to irrigate landscapes only between the hours of midnight and 10:00 a.m. and 8:00 p.m to midnight on designated watering days.
- (b) All operations of the \_\_\_\_\_ (name of your water supplier) shall adhere to water use restrictions prescribed for Stage 2 of the Plan.
- (c) Water customers are requested to practice water conservation and to minimize or discontinue water use for non-essential purposes.

## **Stage 2 Response -- MODERATE Water Shortage Conditions**

**Target: Achieve a \_\_\_\_ percent reduction in \_\_\_\_ (example: total water use, daily water demand, etc.).**

**Best Management Practices for Supply Management:**

*Describe additional measures, if any, to be implemented directly by \_\_\_\_\_ (name of your water supplier) to manage limited water supplies and/or reduce water demand. Examples include: reduced or discontinued flushing of water mains, reduced or discontinued irrigation of public landscaped areas; use of an alternative supply source(s); use of reclaimed water for non-potable purposes.*

Water Use Restrictions for Demand Reduction:

Under threat of penalty for violation, the following water use restrictions shall apply to all persons:

- (a) Irrigation of landscaped areas with hose-end sprinklers or automatic irrigation systems shall be limited to Sundays and Thursdays for customers with a street address ending in an even number (0, 2, 4, 6 or 8), and Saturdays and Wednesdays for water customers with a street address ending in an odd number (1, 3, 5, 7 or 9), and irrigation of landscaped areas is further limited to the hours of 12:00 midnight until 10:00 a.m. and between 8:00 p.m. and 12:00 midnight on designated watering days. However, irrigation of landscaped areas is permitted at anytime if it is by means of a hand-held hose, a faucet filled bucket or watering can of five (5) gallons or less, or drip irrigation system.
- (b) Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle is prohibited except on designated watering days between the hours of 12:00 midnight and 10:00 a.m. and between 8:00 p.m. and 12:00 midnight. Such washing, when allowed, shall be done with a hand-held bucket or a hand-held hose equipped with a positive shutoff nozzle for quick rises. Vehicle washing may be done at any time on the immediate premises of a commercial car wash or commercial service station. Further, such washing may be exempted from these regulations if the health, safety, and welfare of the public is contingent upon frequent vehicle cleansing, such as garbage trucks and vehicles used to transport food and perishables.
- (c) Use of water to fill, refill, or add to any indoor or outdoor swimming pools, wading pools, or jacuzzi-type pools is prohibited except on designated watering days between the hours of 12:00 midnight and 10:00 a.m. and between 8 p.m. and 12:00 midnight.
- (d) Operation of any ornamental fountain or pond for aesthetic or scenic purposes is prohibited except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.
- (e) 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 \_\_\_\_\_ (name of your water supplier).
- (f) Use of water for the irrigation of golf course greens, tees, and fairways is prohibited except on designated watering days between the hours 12:00 midnight and 10:00 a.m. and between 8 p.m. and 12:00 midnight. However, if the golf course utilizes a water source other than that provided by the \_\_\_\_\_ (name of your water supplier), the facility shall not be subject to these regulations.

- (g) All restaurants are prohibited from serving water to patrons except upon request of the patron.
- (h) The following uses of water are defined as non-essential and are prohibited:
  - 1. wash down of any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas;
  - 2. use of water to wash down buildings or structures for purposes other than immediate fire protection;
  - 3. use of water for dust control;
  - 4. flushing gutters or permitting water to run or accumulate in any gutter or street; and
  - 5. failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s).

### **Stage 3 Response -- SEVERE Water Shortage Conditions**

**Target: Achieve a \_\_\_\_ percent reduction in \_\_\_\_\_ (example: total water use, daily water demand, etc.).**

**Best Management Practices for Supply Management:**

*Describe additional measures, if any, to be implemented directly by \_\_\_\_\_ (name of your water supplier) to manage limited water supplies and/or reduce water demand. Examples include: reduced or discontinued flushing of water mains, reduced or discontinued irrigation of public landscaped areas; use of an alternative supply source(s); use of reclaimed water for non-potable purposes.*

**Water Use Restrictions for Demand Reduction:**

All requirements of Stage 2 shall remain in effect during Stage 3 except:

- (a) Irrigation of landscaped areas shall be limited to designated watering days between the hours of 12:00 midnight and 10:00 a.m. and between 8 p.m. and 12:00 midnight and shall be by means of hand-held hoses, hand-held buckets, drip irrigation, or permanently installed automatic sprinkler system only. The use of hose-end sprinklers is prohibited at all times.
- (b) The watering of golf course tees is prohibited unless the golf course utilizes a water source other than that provided by the \_\_\_\_\_ (name of your water supplier).
- (c) The use of water for construction purposes from designated fire hydrants under special permit is to be discontinued.



## Stage 4 Response -- CRITICAL Water Shortage Conditions

**Target:** Achieve a \_\_\_\_ percent reduction in \_\_\_\_\_ (example: total water use, daily water demand, etc.).

### Best Management Practices for Supply Management:

*Describe additional measures, if any, to be implemented directly by \_\_\_\_\_ (name of your water supplier) to manage limited water supplies and/or reduce water demand. Examples include: reduced or discontinued flushing of water mains, reduced or discontinued irrigation of public landscaped areas; use of an alternative supply source(s); use of reclaimed water for non-potable purposes.*

**Water Use Restrictions for Reducing Demand:** All requirements of Stage 2 and 3 shall remain in effect during Stage 4 except:

- (a) Irrigation of landscaped areas shall be limited to designated watering days between the hours of 6:00 a.m. and 10:00 a.m. and between 8:00 p.m. and 12:00 midnight and shall be by means of hand-held hoses, hand-held buckets, or drip irrigation only. The use of hose-end sprinklers or permanently installed automatic sprinkler systems are prohibited at all times.
- (b) Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle not occurring on the premises of a commercial car wash and commercial service stations and not in the immediate interest of public health, safety, and welfare is prohibited. Further, such vehicle washing at commercial car washes and commercial service stations shall occur only between the hours of 6:00 a.m. and 10:00 a.m. and between 6:00 p.m. and 10 p.m.
- (c) The filling, refilling, or adding of water to swimming pools, wading pools, and jacuzzi-type pools is prohibited.
- (d) Operation of any ornamental fountain or pond for aesthetic or scenic purposes is prohibited except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.
- (e) No application for new, additional, expanded, or increased-in-size water service connections, meters, service lines, pipeline extensions, mains, or water service facilities of any kind shall be approved, and time limits for approval of such applications are hereby suspended for such time as this drought response stage or a higher-numbered stage shall be in effect.

## Stage 5 Response -- EMERGENCY Water Shortage Conditions

**Target:** Achieve a \_\_\_\_ percent reduction in \_\_\_\_\_ (example: total water use, daily water demand, etc.).

### Best Management Practices for Supply Management:

*Describe additional measures, if any, to be implemented directly by \_\_\_\_\_ (name of your water supplier) to manage limited water supplies and/or reduce water demand. Examples include: reduced or discontinued flushing of water mains, reduced or discontinued irrigation of public landscaped areas; use of an alternative supply source(s); use of reclaimed water for non-potable purposes.*

Water Use Restrictions for Reducing Demand. All requirements of Stage 2, 3, and 4 shall remain in effect during Stage 5 except:

- (a) Irrigation of landscaped areas is absolutely prohibited.
- (b) Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle is absolutely prohibited.

## Stage 6 Response -- WATER ALLOCATION

In the event that water shortage conditions threaten public health, safety, and welfare, the \_\_\_\_\_ (designated official) is hereby authorized to allocate water according to the following water allocation plan:

### **Single-Family Residential Customers**

The allocation to residential water customers residing in a single-family dwelling shall be as follows:

<b>Persons per Household</b>	<b>Gallons per Month</b>
1 or 2	6,000
3 or 4	7,000
5 or 6	8,000
7 or 8	9,000
9 or 10	10,000
11 or more	12,000

“Household” means the residential premises served by the customer’s meter. “Persons per household” includes only those persons currently physically residing at the premises and expected to reside there for the entire billing period. It shall be assumed that a particular customer’s household is comprised of two (2) persons unless the customer notifies the \_\_\_\_\_ (name of your water supplier) of a greater number of persons per household on a form prescribed by the \_\_\_\_\_ (designated official). The \_\_\_\_\_ (designated official) shall give his/her best effort to see that such forms are mailed, otherwise provided, or made available to every residential customer. If, however, a customer does not receive such a

form, it shall be the customer’s responsibility to go to the \_\_\_\_\_ (name of your water supplier) offices to complete and sign the form claiming more than two (2) persons per household. New customers may claim more persons per household at the time of applying for water service on the form prescribed by the \_\_\_\_\_ (designated official). When the number of persons per household increases so as to place the customer in a different allocation category, the customer may notify the \_\_\_\_\_ (name of water supplier) on such form and the change will be implemented in the next practicable billing period. If the number of persons in a household is reduced, the customer shall notify the \_\_\_\_\_ (name of your water supplier) in writing within two (2) days. In prescribing the method for claiming more than two (2) persons per household, the \_\_\_\_\_ (designated official) shall adopt methods to insure the accuracy of the claim. Any person who knowingly, recklessly, or with criminal negligence falsely reports the number of persons in a household or fails to timely notify the \_\_\_\_\_ (name of your water supplier) of a reduction in the number of person in a household shall be fined not less than \$\_\_\_\_\_.

Residential water customers shall pay the following surcharges:

- \$\_\_\_\_\_ for the first 1,000 gallons over allocation.
- \$\_\_\_\_\_ for the second 1,000 gallons over allocation.
- \$\_\_\_\_\_ for the third 1,000 gallons over allocation.
- \$\_\_\_\_\_ for each additional 1,000 gallons over allocation.

Surcharges shall be cumulative.

### **Master-Metered Multi-Family Residential Customers**

The allocation to a customer billed from a master meter which jointly measures water to multiple permanent residential dwelling units (example: apartments, mobile homes) shall be allocated 6,000 gallons per month for each dwelling unit. It shall be assumed that such a customer’s meter serves two dwelling units unless the customer notifies the \_\_\_\_\_ (name of your water supplier) of a greater number on a form prescribed by the \_\_\_\_\_ (designated official). The \_\_\_\_\_ (designated official) shall give his/her best effort to see that such forms are mailed, otherwise provided, or made available to every such customer. If, however, a customer does not

receive such a form, it shall be the customer's responsibility to go to the \_\_\_\_\_ (name of your water supplier) offices to complete and sign the form claiming more than two (2) dwellings. A dwelling unit may be claimed under this provision whether it is occupied or not. New customers may claim more dwelling units at the time of applying for water service on the form prescribed by the \_\_\_\_\_ (designated official). If the number of dwelling units served by a master meter is reduced, the customer shall notify the \_\_\_\_\_ (name of your water supplier) in writing within two (2) days. In prescribing the method for claiming more than two (2) dwelling units, the \_\_\_\_\_ (designated official) shall adopt methods to insure the accuracy of the claim. Any person who knowingly, recklessly, or with criminal negligence falsely reports the number of dwelling units served by a master meter or fails to timely notify the \_\_\_\_\_ (name of your water supplier) of a reduction in the number of person in a household shall be fined not less than \$ \_\_\_\_\_. Customers billed from a master meter under this provision shall pay the following monthly surcharges:

- \$ \_\_\_\_ for 1,000 gallons over allocation up through 1,000 gallons for each dwelling unit.
- \$ \_\_\_\_, thereafter, for each additional 1,000 gallons over allocation up through a second 1,000 gallons for each dwelling unit.
- \$ \_\_\_\_, thereafter, for each additional 1,000 gallons over allocation up through a third 1,000 gallons for each dwelling unit.
- \$ \_\_\_\_, thereafter for each additional 1,000 gallons over allocation.

Surcharges shall be cumulative.

### **Commercial Customers**

A monthly water allocation shall be established by the \_\_\_\_\_ (designated official), or his/her designee, for each nonresidential commercial customer other than an industrial customer who uses water for processing purposes. The non-residential customer's allocation shall be approximately \_\_\_\_ (e.g. 75%) percent of the customer's usage for corresponding month's billing period for the previous 12 months. If the customer's billing history is shorter than 12 months, the monthly average for the period for which there is a record shall be used for any monthly period for which no history exists. Provided, however, a customer, \_\_\_\_ percent of whose monthly usage is less than \_\_\_\_ gallons, shall be allocated \_\_\_\_ gallons. The \_\_\_\_\_ (designated official) shall give his/her best effort to see that notice of each non-residential customer's allocation is mailed to such customer. If, however, a customer does not receive such notice, it shall be the customer's responsibility to contact the \_\_\_\_\_ (name of your water supplier) to determine the allocation. Upon request of the customer or at the initiative of the \_\_\_\_\_ (designated official), the allocation may be reduced or increased if, (1) the designated period does not accurately reflect the customer's normal water usage, (2) one nonresidential customer agrees to transfer part of its allocation to another nonresidential 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 \_\_\_\_\_ (designated official or alternatively, a special water allocation review committee). Nonresidential commercial customers shall pay the following surcharges:

Customers whose allocation is \_\_\_\_\_ gallons through \_\_\_\_\_ gallons per month:

- \$\_\_\_\_\_ per thousand gallons for the first 1,000 gallons over allocation.
- \$\_\_\_\_\_ per thousand gallons for the second 1,000 gallons over allocation.
- \$\_\_\_\_\_ per thousand gallons for the third 1,000 gallons over allocation.
- \$\_\_\_\_\_ per thousand gallons for each additional 1,000 gallons over allocation.

Customers whose allocation is \_\_\_\_\_ gallons per month or more:

- \_\_\_\_\_ times the block rate for each 1,000 gallons in excess of the allocation up through 5 percent above allocation.
- \_\_\_\_\_ times the block rate for each 1,000 gallons from 5 percent through 10 percent above allocation.
- \_\_\_\_\_ times the block rate for each 1,000 gallons from 10 percent through 15 percent above allocation.
- \_\_\_\_\_ times the block rate for each 1,000 gallons more than 15 percent above allocation.

The surcharges shall be cumulative. As used herein, “block rate” means the charge to the customer per 1,000 gallons at the regular water rate schedule at the level of the customer’s allocation.

### **Industrial Customers**

A monthly water allocation shall be established by the \_\_\_\_\_ (designated official), or his/her designee, for each industrial customer, which uses water for processing purposes. The industrial customer’s allocation shall be approximately \_\_\_\_ (example: 90%) percent of the customer’s water usage baseline. Ninety (90) days after the initial imposition of the allocation for industrial customers, the industrial customer’s allocation shall be further reduced to \_\_\_\_ (example: 85%) percent of the customer’s water usage baseline. The industrial customer’s water use baseline will be computed on the average water use for the \_\_\_\_\_ month period ending prior to the date of implementation of Stage 2 of the Plan. If the industrial water customer’s billing history is shorter than \_\_\_\_ months, 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. The \_\_\_\_\_ (designated official) shall give his/her best effort to see that notice of each industrial customer’s allocation is mailed to such customer. If, however, a customer does not receive such notice, it shall be the customer’s responsibility to contact the \_\_\_\_\_ (name of your water supplier) to determine the allocation, and the allocation shall be fully effective notwithstanding the lack of

receipt of written notice. Upon request of the customer or at the initiative of the \_\_\_\_\_ (designated official), the allocation may be reduced or increased, (1) if the designated period does not accurately reflect the customer's normal water use because the customer had shutdown a major processing unit for repair or overhaul during the period, (2) the customer has added or is in the process of adding significant additional processing capacity, (3) the customer has shutdown or significantly reduced the production of a major processing unit, (4) the customer has previously implemented significant permanent water conservation measures such that the ability to further reduce water use is limited, (5) the customer agrees to transfer part of its allocation to another industrial customer, or (6) if other objective evidence demonstrates that the designated allocation is inaccurate under present conditions. A customer may appeal an allocation established hereunder to the \_\_\_\_\_ (designated official or alternatively, a special water allocation review committee). Industrial customers shall pay the following surcharges:

Customers whose allocation is \_\_\_\_\_ gallons through \_\_\_\_\_ gallons per month:

- \$\_\_\_\_\_ per thousand gallons for the first 1,000 gallons over allocation.
- \$\_\_\_\_\_ per thousand gallons for the second 1,000 gallons over allocation.
- \$\_\_\_\_\_ per thousand gallons for the third 1,000 gallons over allocation.
- \$\_\_\_\_\_ per thousand gallons for each additional 1,000 gallons over allocation.

Customers whose allocation is \_\_\_\_\_ gallons per month or more:

- \_\_\_\_\_ times the block rate for each 1,000 gallons in excess of the allocation up through 5 percent above allocation.
- \_\_\_\_\_ times the block rate for each 1,000 gallons from 5 percent through 10 percent above allocation.
- \_\_\_\_\_ times the block rate for each 1,000 gallons from 10 percent through 15 percent above allocation.
- \_\_\_\_\_ times the block rate for each 1,000 gallons more than 15 percent above allocation.

The surcharges shall be cumulative. As used herein, "block rate" means the charge to the customer per 1,000 gallons at the regular water rate schedule at the level of the customer's allocation.

## **Section X: Enforcement**

- (a) No person shall knowingly or intentionally allow the use of water from the \_\_\_\_\_ (name of your water supplier) for residential, commercial, industrial, agricultural, governmental, or any other purpose in a manner contrary to any provision of this Plan, or in an amount in excess of that permitted by the drought response stage in effect at the

time pursuant to action taken by \_\_\_\_\_ (designated official), or his/her designee, in accordance with provisions of this Plan.

- (b) Any person who violates this Plan is guilty of a misdemeanor and, upon conviction shall be punished by a fine of not less than \_\_\_\_\_ dollars (\$\_\_\_) and not more than \_\_\_\_\_ dollars (\$\_\_\_). Each day that one or more of the provisions in this Plan is violated shall constitute a separate offense. If a person is convicted of three or more distinct violations of this Plan, the \_\_\_\_\_ (designated official) shall, upon due notice to the customer, be authorized to discontinue water service to the premises where such violations occur. Services discontinued under such circumstances shall be restored only upon payment of a re-connection charge, hereby established at \$\_\_\_\_\_, and any other costs incurred by the \_\_\_\_\_ (name of your water supplier) in discontinuing service. In addition, suitable assurance must be given to the \_\_\_\_\_ (designated official) that the same action shall not be repeated while the Plan is in effect. Compliance with this plan may also be sought through injunctive relief in the district court.
- (c) Any person, including a person classified as a water customer of the \_\_\_\_\_ (name of your water supplier), in apparent control of the property where a violation occurs or originates shall be presumed to be the violator, and proof that the violation occurred on the person's property shall constitute a rebuttable presumption that the person in apparent control of the property committed the violation, but any such person shall have the right to show that he/she did not commit the violation. Parents shall be presumed to be responsible for violations of their minor children and proof that a violation, committed by a child, occurred on property within the parents' control shall constitute a rebuttable presumption that the parent committed the violation, but any such parent may be excused if he/she proves that he/she had previously directed the child not to use the water as it was used in violation of this Plan and that the parent could not have reasonably known of the violation.
- (d) Any employee of the \_\_\_\_\_ (name of your water supplier), police officer, or other \_\_\_\_\_ employee designated by the \_\_\_\_\_ (designated official), may issue a citation to a person he/she reasonably believes to be in violation of this Ordinance. The citation shall be prepared in duplicate and shall contain the name and address of the alleged violator, if known, the offense charged, and shall direct him/her to appear in the \_\_\_\_\_ (example: municipal court) on the date shown on the citation for which the date shall not be less than 3 days nor more than 5 days from the date the citation was issued. The alleged violator shall be served a copy of the citation. Service of the citation shall be complete upon delivery of the citation to the alleged violator, to an agent or employee of a violator, or to a person over 14 years of age who is a member of the violator's immediate family or is a resident of the violator's residence. The alleged violator shall appear in \_\_\_\_\_ (example: municipal court) to enter a plea of guilty or not guilty for the violation of this Plan. If the alleged violator fails to appear in \_\_\_\_\_ (example: municipal court), a warrant for his/her arrest may be issued. A summons to appear may be issued in lieu of an arrest warrant. These cases shall be expedited and

given preferential setting in \_\_\_\_\_ (example: municipal court) before all other cases.

## **Section XI: Variances**

The \_\_\_\_\_ (designated official), or his/her designee, may, in writing, grant temporary variance for existing water uses otherwise prohibited under this Plan if it is determined that failure to grant such variance would cause an emergency condition adversely affecting the health, sanitation, or fire protection for the public or the person requesting such variance 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.

Persons requesting an exemption from the provisions of this Ordinance shall file a petition for variance with the \_\_\_\_\_ (name of your water supplier) within 5 days after the Plan or a particular drought response stage has been invoked. All petitions for variances shall be reviewed by the \_\_\_\_\_ (designated official), or his/her designee, and shall include the following:

- (a) Name and address of the petitioner(s).
- (b) Purpose of water use.
- (c) Specific provision(s) of the Plan from which the petitioner is requesting relief.
- (d) Detailed statement as to how the specific provision of the Plan adversely affects the petitioner or what damage or harm will occur to the petitioner or others if petitioner complies with this Ordinance.
- (e) Description of the relief requested.
- (f) Period of time for which the variance is sought.
- (g) Alternative water use restrictions or other measures the petitioner is taking or proposes to take to meet the intent of this Plan and the compliance date.
- (h) Other pertinent information.





**Texas Water Development Board**  
**Water Conservation Program Annual Report**  
**for Non-Water Suppliers**

Texas Water Code requires that each entity that is required to submit a water conservation plan to the Texas Commission on Environmental Quality (TCEQ) shall file an annual report to the Texas Water Development Board (TWDB) on the entity's progress in implementing each of the minimum requirements in their water conservation plan. Implementation reports prepared for the TCEQ providing the required information may be submitted to the TWDB to fulfill this reporting requirement.

The following questions are designed to provide the TWDB this information in a concise and consistent format. Please fill in the blanks that pertain to your program as completely and objectively as possible. Your water conservation plan should contain long-term elements such as ongoing education activities, metering, water accounting and estimated water savings from water reuse and recycling activities, leak detection and repair and other conservation activities. **As you complete the report form, please review your entity's water conservation plan to see if you are making progress toward meeting your stated goal(s).**

**Return completed form to:**

**Executive Administrator**  
**Texas Water Development Board**  
**P.O. Box 13231**  
**Austin, Texas 78711-3231**  
**ATTN: CONSERVATION**



## ENTITY DATA

Name of Entity: Alcoa World Alumina LLC, Point Comfort Operations

Water Right Number : 1842A, Certificate of Adjudication: 15-4792A & System ID # 0290014.

Address: State Highway 35 City: Point Comfort

State: TX Zip Code: 77978 Email: \_\_\_\_\_

Telephone Number: (361) 987-6439 Fax: (361) 987-6102

Regional Water Planning Group: L

Groundwater Conservation District: \_\_\_\_\_

Form Completed By: Lindley Jarrett Title: Staff Environmental Engineer

Signature: Jarrett, Lindley Digitally signed by Jarrett, Lindley  
DN: cn=Lindley, o=Alcoa, ou=PTC, email=jarrett.lindley@alcoa.com, c=US  
Reason: I am the author of this document  
Date: 2011.04.29 13:10:17 -0500 Date: 04/29/2011

Reporting Period: January 01, 2010 to December 31, 2010

Total Gallons of Water Used (treated or raw)	Total Gallons per Day (GPD)*	Number of Acres Irrigated if for Agricultural Irrigation Use
761,782,121	2,087,074.30	0

\* **Total GPD:** the calculation is made by dividing the total water diverted or treated by 365

Please provide the **specific and quantified five and ten-year targets** as listed in your water conservation plan:

		Date to Achieve Target
Five-year target	1562 acre-feet	2014
Ten-year target	1562 acre-feet	2019

## LONG TERM WATER CONSERVATION PROGRAM

1. Approximately how much water was saved during the reporting period due to the overall conservation program?

Gallons of Water Saved	Dollar Value of Water Savings*
Undetermined	NA

\* Based on water savings and the cost of treatment or purchase of your water, and any deferred capital costs due to conservation.

2. In your opinion, how you would rank the effectiveness of your conservation program?

**Effective**



**Somewhat  
Effective**



**Less than  
Effective**



**Not Effective**



**Do Not Know**



Please provide additional information about any successes or problems you may have experienced in implementing your plan.

Point Comfort Operations water conservation strategy includes metering of potable and surface water lines, effectuating early repairs when leaks are detected, ongoing training and education as well as other water conservation practices . Metering accounts for water use on an ongoing basis and allows the location to make informed decisions with respect to trends in historical and current water usage. The location continued demonstration in

3. Please provide information on the water conservation activities your entity undertook during the reporting period:

The location continued to monitor, track and report potable water use which provided a trigger to identify anomalies in water usage. Maintenance is carried out on pipelines, water storage vessels and other aspects of the location's water distribution system on an ongoing basis. Ongoing good maintenance practices reduces the occurrence of leaks as well as provide opportunities for early leak detection and effectuating repairs.

As mentioned above, the location recycled and reused chlorinated potable water at the sanitary treatment plant which has the potential to reduce potable water usage by over 3,000,000 gallons per year.

Operators received ongoing appropriate training and licensing with respect to the operation, treatment and distribution of potable water systems under their control. Ongoing education and training is a proven water conservation activity.

In addition to the above the location sought and received a beneficial re-use permit which will allow for the re-use of industrial waste water and the reduction of potable water use for irrigation purposes.

4. How often does your entity review your water conservation program?  
Once per year
5. What year did your entity adopt, or revise, their water conservation plan? 2006
6. What might your entity do to improve the effectiveness of your water conservation program?

Continue dialogue with local community on potable water sharing and review policy with respect to supplying treated potable water to neighboring industrial facilities while exploring water conservation opportunities for the secondary reuse of waste water with surrounding industrial facilities.

7. What might the TWDB or TCEQ do to assist you in improving the effectiveness of your water conservation program?

Develop programs that promote and encourage beneficial reuse of industrial wastewater and the use and reuse of secondary waste water amongst neighboring industrial facilities.

8. **(Optional)** If known, how much expense did your entity incur in implementing your water conservation program during the reporting period (*equipment, materials, staff time, etc.*)?  
 \_\_\_\_\_ (dollars/year)

**9. Recycling and Reuse of Water or Wastewater Effluent**

Please provide the following data regarding what types of water recycling or reuse activities were practiced by your entity during the reporting period, and what volume:

Use	Total Annual Volume (in gallons)
Plant wash down	
Chlorination/de-chlorination	
Industrial	307,984,553
Landscape irrigation (parks, golf courses)	
Agricultural	
Other, please describe: dust control	453,797,568
<b>Total</b>	<b>761,782,121</b>

Could treated effluent be substituted for certain potable water now being used? Yes ☒ No ☐



### 10. Drought Contingency and Emergency Water Demand Management

During the reporting period, did your entity activate its Drought Contingency Plan?

Yes ☐ No ☒

If yes, please check all the appropriate boxes for the reason why:

Reason	
Water Shortage	<input type="checkbox"/>
High Demand	<input type="checkbox"/>
Capacity Issues	<input type="checkbox"/>
Equipment Failure	<input type="checkbox"/>
Other, please describe:	

Start Date January 1, 2010

End Date December 1, 2010

**Submit Form by Email**

**Print Form**

**Reset Form**

ORDINANCE NO. 2011-0-4

AN ORDINANCE ADOPTING A DROUGHT CONTINGENCY PLAN;  
ESTABLISHING CRITERIA FOR THE INITIATION AND  
TERMINATION OF DROUGHT RESPONSE STAGES;  
ESTABLISHING RESTRICTIONS ON CERTAIN WATER USES;  
ESTABLISHING PENALTIES FOR THE VIOLATION OF AND  
PROVISIONS FOR ENFORCEMENT OF THESE RESTRICTIONS;  
ESTABLISHING PROCEDURES FOR GRANTING VARIANCES; AND  
PROVIDING SEVERABILITY AND AN EFFECTIVE DATE.

WHEREAS, the City of Point Comfort, Texas recognizes that the amount of water available to the City and its water utility customers is limited and subject to depletion during periods of extended drought;

WHEREAS, the City recognizes that natural limitations due to drought conditions and other acts of God cannot guarantee an uninterrupted water supply for all purposes;

WHEREAS, Section 11.1272 of the Texas Water Code and applicable rules of the Texas Commission on Environmental Quality require all public water supply systems in Texas to prepare a drought contingency plan; and

WHEREAS, as authorized under law, and in the best interests of the citizens of Point Comfort, Texas, the City Council deems it expedient and necessary to establish certain rules and policies for the orderly and efficient management of limited water supplies during drought and other water supply emergencies;

NOW THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF POINT COMFORT, TEXAS:

SECTION 1

That the City of Point Comfort, Texas Drought Contingency Plan attached hereto as Exhibit "A" and made a part hereof for all purposes be, and the same is hereby, adopted as the official policy of the City.

SECTION 2

That all ordinances that are in conflict with the provisions of this ordinance be, and the same are hereby, repealed and all other ordinances of the City not in conflict with the provisions of this ordinance shall remain in full force and effect.

### SECTION 3


Should any paragraph, sentence, subdivision, clause, phrase, or section of this ordinance be adjudged or held to be unconstitutional, illegal or invalid, the same shall not affect the validity of this ordinance as a whole or any part of provision thereof, other than the part so declared to be invalid, illegal or unconstitutional.

### SECTION 4

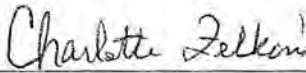
This ordinance shall take effect immediately from and after its passage and the publication of the caption, as the law in such cases provides.

PASSED, ADOPTED AND APPROVED, on this 29th day of August, 2011.

CITY OF POINT COMFORT, TEXAS

  
Pam Lambden, Mayor

ATTEST:

  
Charlotte Felkins, City Secretary





# **Drought Contingency Plan for a Retail Public Water Supplier**

Texas Commission on Environmental Quality

**Instructions:** The following form is a model of a drought contingency plan for a retail public water supplier. Not all items may apply to your system's situation. This form is supplied for your convenience, but you are not required to use this form to submit your plan to the TCEQ. Submit completed plans to: Water Supply Division MC 160, TCEQ, P.O. Box 13087, Austin TX 78711-3087.

**City of Point Comfort, Texas  
902 Lamar St.  
Point Comfort, Texas**

**CCN#: P0766  
PWS #s:0290001  
August 29, 2011**

## **Section I: Declaration of Policy, Purpose, and Intent**

In order to conserve the available water supply and 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 CITY OF POINT COMFORT, TEXAS hereby adopts the following regulations and restrictions on the delivery and consumption of water through an ordinance.

Water uses regulated or prohibited under this Drought Contingency Plan (the Plan) are considered to be non-essential and continuation of such uses during times of water shortage or other emergency water supply condition are deemed to constitute a waste of water which subjects the offender(s) to penalties as defined in Section XI of this Plan.

## **Section II: Public Involvement**

Opportunity for the public to provide input into the preparation of the Plan was provided by the CITY OF POINT COMFORT, TEXAS by means of scheduling and providing public notice of a public meeting to discuss water shortage measures.

## **Section III: Public Education**

The CITY OF POINT COMFORT, TEXAS will periodically provide the public 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 the holding of public meetings and utility bill inserts.



#### **Section IV: Coordination with Regional Water Planning Groups**

The service area of the CITY OF POINT COMFORT, TEXAS is located within the Region L Regional Planning Area and CITY OF POINT COMFORT, TEXAS will provide a copy of this Plan to the Region L Regional Planning Area.

#### **Section V: Authorization**

The Mayor, 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 Mayor, or his/her designee shall have the authority 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 persons, customers, and property utilizing water provided by the CITY OF POINT COMFORT, TEXAS. The terms "person" and "customer" as used in the Plan include individuals, corporations, partnerships, associations, and all other legal entities.

#### **Section VII: Definitions**

For the purposes of this Plan, the following definitions shall apply:

Aesthetic water use: water use for ornamental or decorative purposes such as fountains, reflecting pools, and water gardens.

Commercial and institutional water use: water use which is integral to the operations of commercial and non-profit establishments and governmental entities such as retail establishments, hotels and motels, restaurants, and office buildings.

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 supply is conserved and made available for future or alternative uses.

Customer: any person, company, or organization using water supplied by CITY OF POINT COMFORT, TEXAS.

Domestic water use: water use for personal needs or for household or sanitary purposes such as drinking, bathing, heating, cooking, sanitation, or for cleaning a residence, business, industry, or institution.

Even number address: street addresses, box numbers, or rural postal route numbers ending in 0, 2, 4, 6, or 8 and locations without addresses.

Industrial water use: the use of water in processes designed to convert materials of lower value into forms having greater usability and value.

Landscape irrigation use: water used for the irrigation and maintenance of landscaped areas, whether publicly or privately owned, including residential and commercial lawns, gardens, golf courses,

parks, and rights-of-way and medians.

Non-essential water use: water uses that are not essential nor required for the protection of public, health, safety, and welfare, including:

- (a) irrigation of landscape areas, including parks, athletic fields, and golf courses, except otherwise provided under this Plan;
- (b) use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle;
- (c) use of water to wash down any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas;
- (d) use of water to wash down buildings or structures for purposes other than immediate fire protection;
- (e) flushing gutters or permitting water to run or accumulate in any gutter or street;
- (f) use of water to fill, refill, or add to any indoor or outdoor swimming pools or Jacuzzi-type pools;
- (g) use of water in a fountain or pond for aesthetic or scenic purposes except where necessary to support aquatic life;
- (h) failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s); and
- (i) use of water from hydrants for construction purposes or any other purposes other than fire fighting.

Odd numbered address: street addresses, box numbers, or rural postal route numbers ending in 1, 3, 5, 7, or 9.

## **Section VIII: Criteria for Initiation and Termination of Drought Response Stages**

The Mayor, 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, that is, when the specified “triggers” are reached.

The triggering criteria described below are based on trigger levels based on a statistical analysis of the vulnerability of the water source under drought of record conditions, the supplier of the City’s raw water supply or based on known system capacity limits.

### **Stage 1 Triggers -- MILD Water Shortage Conditions**

#### Requirements for initiation

Customers shall be requested to voluntarily conserve water and adhere to the prescribed restrictions on certain water uses, defined in Section VII. Definitions, when (1) the water supply available to the CITY OF POINT COMFORT, TEXAS is equal to or greater than fifty-one percent OR MORE (51%) percentage of storage; or (2) pursuant to requirements specified in the CITY OF POINT COMFORT, TEXAS wholesale water purchase contract with the LAVACA NAVIDAD RIVER AUTHORITY, notification is received requesting initiation of Stage 1 of the Drought Contingency Plan, or (3) because of conditions outside of the control of the CITY OF POINT COMFORT,



TEXAS the CITY OF POINT COMFORT, TEXAS cannot supply a sufficient water supply to its customers.

Requirements for termination

Stage 1 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of 3 consecutive days.

**Stage 2 Triggers -- MODERATE Water Shortage Conditions**

Requirements for initiation

Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses provided in Section IX of this Plan when (1) the water supply available to the CITY OF POINT COMFORT, TEXAS is equal to or less than fifty (50%) percentage of storage; or (2) pursuant to requirements specified in the CITY OF POINT COMFORT, TEXAS wholesale water purchase contract with the LAVACA NAVIDAD RIVER AUTHORITY, notification is received requesting initiation of Stage 1 of the Drought Contingency Plan, or (3) because of conditions outside of the control of the CITY OF POINT COMFORT, TEXAS the CITY OF POINT COMFORT, TEXAS cannot supply a sufficient water supply to its customers.

Requirements for termination

Stage 2 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of 3 consecutive days. Upon termination of Stage 2, Stage 1 becomes operative.

**Stage 3 Triggers -- SEVERE Water Shortage Conditions**

Requirements for initiation

Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses for Stage 3 of this Plan when (1) the water supply available to the CITY OF POINT COMFORT, TEXAS is equal to or less than forty (40%) percentage of storage; or (2) pursuant to requirements specified in the CITY OF POINT COMFORT, TEXAS wholesale water purchase contract with the LAVACA NAVIDAD RIVER AUTHORITY, notification is received requesting initiation of Stage 1 of the Drought Contingency Plan, or (3) because of conditions outside of the control of the CITY OF POINT COMFORT, TEXAS the CITY OF POINT COMFORT, TEXAS cannot supply a sufficient water supply to its customers.

Requirements for termination

Stage 3 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of 3 consecutive days. Upon termination of Stage 3, Stage 2 becomes operative.

**Stage 4 Triggers -- CRITICAL Water Shortage Conditions**

Requirements for initiation

Customers shall be required to comply with the requirements and restrictions on certain non-essential

water uses for Stage 4 of this Plan when (1) the water supply available to the CITY OF POINT COMFORT, TEXAS is equal to or less than thirty (30%) percentage of storage; or (2) pursuant to requirements specified in the CITY OF POINT COMFORT, TEXAS wholesale water purchase contract with the LAVACA NAVIDAD RIVER AUTHORITY, notification is received requesting initiation of Stage 1 of the Drought Contingency Plan, or (3) because of conditions outside of the control of the CITY OF POINT COMFORT, TEXAS the CITY OF POINT COMFORT, TEXAS cannot supply a sufficient water supply to its customers.

Requirements for termination

Stage 4 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of 3 consecutive days. Upon termination of Stage 4, Stage 3 becomes operative.

**Stage 5 Triggers -- EMERGENCY Water Shortage Conditions**

Requirements for initiation

Customers shall be required to comply with the requirements and restrictions for Stage 5 of this Plan when the Mayor, or his/her designee, determines that a water supply emergency exists based on:

1. Major water line breaks, or pump or system failures occur, which cause unprecedented loss of capability to provide water service; **or**
2. Natural or man-made contamination of the water supply source(s).

Requirements for termination

Stage 5 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of 3 consecutive days.

**Stage 6 Triggers -- WATER ALLOCATION**

Requirements for initiation

Customers shall be required to comply with the water allocation plan prescribed in Section IX of this Plan and comply with the requirements and restrictions for Stage 5 of this Plan when (1) the water supply available to the CITY OF POINT COMFORT, TEXAS is equal to or less than twenty (20) percentage of storage; or (2) pursuant to requirements specified in the CITY OF POINT COMFORT, TEXAS wholesale water purchase contract with the LAVACA NAVIDAD RIVER AUTHORITY, notification is received requesting initiation of Stage 1 of the Drought Contingency Plan, or (3) because of conditions outside of the control of the CITY OF POINT COMFORT, TEXAS the CITY OF POINT COMFORT, TEXAS cannot supply a sufficient water supply to its customers.

Requirements for termination - Water allocation may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of 3 consecutive days.

## **Section IX: Drought Response Stages**

The Mayor, or his/her designee, shall monitor water supply and/or demand conditions on a daily basis and, in accordance with the triggering criteria set forth in Section VIII of this Plan, shall determine that a mild, moderate, severe, critical, emergency or water shortage condition exists and shall implement the following notification procedures:

### **Notification**

#### Notification of the Public:

The Mayor, or his/ her designee shall notify the public by means of:

publication in a newspaper of general circulation,  
signs posted in public places

#### Additional Notification:

The Mayor, or his/ her designee shall notify directly, or cause to be notified directly, the following individuals and entities:

*Members of the City Council*  
*Fire Chief*  
*County Emergency Management Coordinator*  
*County Judge*  
*TCEQ (required when mandatory restrictions are imposed)*  
*Major water users*

## **Stage 1 Response -- MILD Water Shortage Conditions**

**Target: Achieve a voluntary 10 percent reduction in total water use.**

### Voluntary Water Use Restrictions for Reducing Demand :

- (a) Water customers are requested to voluntarily limit the irrigation of landscaped areas, filling of swimming pools, and washing of vehicles to Tuesdays and Fridays for all customers, between the hours of 6:00 p.m. and 10:00 p.m.
- (b) All operations of the CITY OF POINT COMFORT, TEXAS shall adhere to water use restrictions prescribed for Stage 2 of the Plan.
- (c) Water customers are requested to practice water conservation and to minimize or discontinue water use for non-essential purposes.

## **Stage 2 Response -- MODERATE Water Shortage Conditions**

**Target: Achieve a 10 percent reduction in total water use.**

Water Use Restrictions for Demand Reduction:

Under threat of penalty for violation, the following water use restrictions shall apply to all persons:

- (a) Water customers are required to limit the irrigation of landscaped areas to Tuesdays and Fridays for all customers, between the hours of 6:00 p.m. and 10:00 p.m. However, irrigation of landscaped areas is permitted at anytime if it is by means of a hand-held hose, a faucet filled bucket or watering can of five (5) gallons or less, or drip irrigation system.
- (b) Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle is prohibited except on Tuesdays and Fridays between the hours of 6:00 p.m. and 10:00 p.m. Such washing, when allowed, shall be done with a hand-held bucket or a hand-held hose equipped with a positive shutoff nozzle for quick rises. Vehicle washing may be done at any time on the immediate premises of a commercial car wash or commercial service station. Further, such washing may be exempted from these regulations if the health, safety, and welfare of the public is contingent upon frequent vehicle cleansing, such as garbage trucks and vehicles used to transport food and perishables.
- (c) Use of water to fill, refill, or add to any indoor or outdoor swimming pools, wading pools, or Jacuzzi-type pools is prohibited except on Tuesdays and Fridays between the hours of 6:00 p.m. and 10:00 p.m.
- (d) Operation of any ornamental fountain or pond for aesthetic or scenic purposes is prohibited except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.
- (e) 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 CITY OF POINT COMFORT, TEXAS.
- (f) All restaurants are prohibited from serving water to patrons except upon request of the patron.
- (g) The following uses of water are defined as non-essential and are prohibited:
  - 1. wash down of any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas;
  - 2. use of water to wash down buildings or structures for purposes other than immediate fire protection;
  - 3. use of water for dust control;
  - 4. flushing gutters or permitting water to run or accumulate in any gutter or street; and

5. failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s).

### **Stage 3 Response -- SEVERE Water Shortage Conditions**

**Target: Achieve a 20 percent reduction in total water use.**

Water Use Restrictions for Demand Reduction:

All requirements of Stage 2 shall remain in effect during Stage 3 except:

- (a) Irrigation of landscaped areas shall be limited to Tuesdays and Fridays between the hours of 8 p.m. and 10:00 p.m. and shall be by means of hand-held hoses, hand-held buckets, drip irrigation, or permanently installed automatic sprinkler system only. The use of hose-end sprinklers is prohibited at all times.

### **Stage 4 Response -- CRITICAL Water Shortage Conditions**

**Target: Achieve a 35 percent reduction in total water use.**

Water Use Restrictions for Reducing Demand:. All requirements of Stage 2 and 3 shall remain in effect during Stage 4 except:

- (a) Irrigation of landscaped areas shall be limited to Fridays between the hours of 8:00 p.m. and 10:00 p.m. and shall be by means of hand-held hoses, hand-held buckets, or drip irrigation only. The use of hose-end sprinklers or permanently installed automatic sprinkler systems are prohibited at all times.
- (b) Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle not occurring on the premises of a commercial car wash and commercial service stations and not in the immediate interest of public health, safety, and welfare is prohibited.
- (c) The filling, refilling, or adding of water to swimming pools, wading pools, and Jacuzzi-type pools is prohibited.
- (d) Operation of any ornamental fountain or pond for aesthetic or scenic purposes is prohibited except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.
- (e) No application for new, additional, expanded, or increased-in-size water service connections, meters, service lines, pipeline extensions, mains, or water service facilities of any kind shall be approved, and time limits for approval of such applications are hereby suspended for such time as this drought response stage or a higher-numbered stage shall be in effect.



## **Stage 5 Response -- EMERGENCY Water Shortage Conditions**

**Target:** Achieve a 50 percent reduction in total water use.

Water Use Restrictions for Reducing Demand. All requirements of Stage 2, 3, and 4 shall remain in effect during Stage 5 except:

- (a) Irrigation of landscaped areas is absolutely prohibited.
- (b) Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle is absolutely prohibited.

## **Stage 6 Response -- WATER ALLOCATION**

In the event that water shortage conditions threaten public health, safety, and welfare, the Mayor, or his/her designee is hereby authorized to allocate water according to the following water allocation plan:

### **Single-Family Residential Customers**

The allocation to residential water customers residing in a single-family dwelling shall be as follows:

<b>Persons per Household</b>	<b>Gallons per Month</b>
1 or 2	6,000
3 or 4	7,000
5 or 6	8,000
7 or 8	9,000
9 or 10	10,000
11 or more	12,000

“Household” means the residential premises served by the customer’s meter. “Persons per household” include only those persons currently physically residing at the premises and expected to reside there for the entire billing period. It shall be assumed that a particular customer’s household is comprised of two (2) persons unless the customer notifies the Mayor or his/her designee of a greater number of persons per household on a form prescribed by the Mayor, or his/her designee. The Mayor, or his/her designee shall give his/her best effort to see that such forms are mailed, otherwise provided, or made available to every residential customer. If, however, a customer does not receive such a form, it shall be the customer’s responsibility to go to the CITY OF POINT COMFORT, TEXAS offices to complete and sign the form claiming more than two (2) persons per household. New customers may claim more persons per household at the time of applying for water service on the form prescribed by the Mayor, or his/her designee. When the number of persons per household increases so as to place the customer in a different allocation category, the customer may notify the CITY

OF POINT COMFORT, TEXAS on such form and the change will be implemented in the next practicable billing period. If the number of persons in a household is reduced, the customer shall notify the CITY OF POINT COMFORT, TEXAS in writing within two (2) days. In prescribing the method for claiming more than two (2) persons per household, the Mayor, or his/her designee shall adopt methods to insure the accuracy of the claim. Any person who knowingly, recklessly, or with criminal negligence falsely reports the number of persons in a household or fails to timely notify the CITY OF POINT COMFORT, TEXAS of a reduction in the number of person in a household shall be fined not less than \$200.00.

Residential water customers shall pay the following surcharges:

- \$3.50 for the first 1,000 gallons over allocation.
- \$4.50 for the second 1,000 gallons over allocation.
- \$5.50 for the third 1,000 gallons over allocation.
- \$6.50 for each additional 1,000 gallons over allocation.

Surcharges shall be cumulative.

#### **Master-Metered Multi-Family Residential Customers**

The allocation to a customer billed from a master meter which jointly measures water to multiple permanent residential dwelling units (example: apartments, mobile homes) shall be allocated 6,000 gallons per month for each dwelling unit. It shall be assumed that such a customer's meter serves two dwelling units unless the customer notifies the CITY OF POINT COMFORT, TEXAS of a greater number on a form prescribed by the Mayor or his/her designee. The Mayor or his/her designee shall give his/her best effort to see that such forms are mailed, otherwise provided, or made available to every such customer. If, however, a customer does not receive such a form, it shall be the customer's responsibility to go to the CITY OF POINT COMFORT, TEXAS offices to complete and sign the form claiming more than two (2) dwellings. A dwelling unit may be claimed under this provision whether it is occupied or not. New customers may claim more dwelling units at the time of applying for water service on the form prescribed by the Mayor or his/her designee. If the number of dwelling units served by a master meter is reduced, the customer shall notify the CITY OF POINT COMFORT, TEXAS in writing within two (2) days. In prescribing the method for claiming more than two (2) dwelling units, the Mayor or his/her designee shall adopt methods to insure the accuracy of the claim. Any person who knowingly, recklessly, or with criminal negligence falsely reports the number of dwelling units served by a master meter or fails to timely notify the CITY OF POINT COMFORT, TEXAS of a reduction in the number of person in a household shall be fined not less than \$200.00. Customers billed from a master meter under this provision shall pay the following monthly surcharges:

- \$3.50 for 1,000 gallons over allocation up through 1,000 gallons for each dwelling unit.
- \$4.50, thereafter, for each additional 1,000 gallons over allocation up through a second 1,000 gallons for each dwelling unit.

\$5.50, thereafter, for each additional 1,000 gallons over allocation  
up through a third 1,000 gallons for each dwelling unit.  
\$6.50, thereafter for each additional 1,000 gallons over allocation.

Surcharges shall be cumulative.

### **Commercial Customers**

A monthly water allocation shall be established by the Mayor, or his/her designee, for each nonresidential commercial customer other than an industrial customer who uses water for processing purposes. The non-residential customer's allocation shall be approximately 75% percent of the customer's usage for corresponding month's billing period for the previous 12 months. If the customer's billing history is shorter than 12 months, the monthly average for the period for which there is a record shall be used for any monthly period for which no history exists. Provided, however, a customer of whose monthly usage is less than 10,000 gallons, shall be allocated 10,000 gallons. The Mayor or his/her designee shall give his/her best effort to see that notice of each non-residential customer's allocation is mailed to such customer. If, however, a customer does not receive such notice, it shall be the customer's responsibility to contact the CITY OF POINT COMFORT, TEXAS to determine the allocation. Upon request of the customer or at the initiative of the Mayor or his/her designee the allocation may be reduced or increased if, (1) the designated period does not accurately reflect the customer's normal water usage, (2) one nonresidential customer agrees to transfer part of its allocation to another nonresidential 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 Mayor or his/her designee. Nonresidential commercial customers shall pay the following surcharges:

Customers whose allocation is 10,000 gallons through 50,000 gallons per month:

\$3.50 per thousand gallons for the first 1,000 gallons over allocation.  
\$4.50 per thousand gallons for the second 1,000 gallons over allocation.  
\$5.50 per thousand gallons for the third 1,000 gallons over allocation.  
\$6.50 per thousand gallons for each additional 1,000 gallons over allocation.

### **Industrial Customers**

A monthly water allocation shall be established by the Mayor or his/her designee, for each industrial customer, which uses water for processing purposes. The industrial customer's allocation shall be approximately 90% percent of the customer's water usage baseline. Ninety (90) days after the initial imposition of the allocation for industrial customers, the industrial customer's allocation shall be further reduced to 85% percent of the customer's water usage baseline. The industrial customer's water use baseline will be computed on the average water use for the 12 month period ending prior to the date of implementation of Stage 2 of the Plan. If the industrial water customer's billing history is shorter than 12 months, 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. The Mayor or his/her designee shall give his/her best effort to see that notice of each industrial customer's allocation is mailed to such customer. If, however, a customer does not receive such notice, it shall be the customer's responsibility to contact the CITY OF POINT COMFORT, TEXAS to determine the allocation, and the allocation shall be fully effective notwithstanding the lack of receipt of written notice. Upon request of the customer or at the initiative of the Mayor or his/her designee, the allocation may be reduced or increased, (1) if the designated period does not accurately reflect the customer's normal water use because the customer had shutdown a major processing unit for repair or overhaul during the period, (2) the customer has added or is in the process of adding significant additional processing capacity, (3) the customer has shutdown or significantly reduced the production of a major processing unit, (4) the customer has previously implemented significant permanent water conservation measures such that the ability to further reduce water use is limited, (5) the customer agrees to transfer part of its allocation to another industrial customer, or (6) if other objective evidence demonstrates that the designated allocation is inaccurate under present conditions. A customer may appeal an allocation established hereunder to the designated official. Industrial customers shall pay the following surcharges:

Customers whose allocation is 50,001 gallons per month or more:

- One (1) times the block rate for each 1,000 gallons in excess of the allocation up through 5 percent above allocation.
- One and one-half (1.5) times the block rate for each 1,000 gallons from 5 percent through 10 percent above allocation.
- Two (2) times the block rate for each 1,000 gallons from 10 percent through 15 percent above allocation.
- Three (3) times the block rate for each 1,000 gallons more than 15 percent above allocation.

The surcharges shall be cumulative. As used herein, "block rate" means the charge to the customer per 1,000 gallons at the regular water rate schedule at the level of the customer's allocation.

#### **Section X: Enforcement**

- (a) No person shall knowingly or intentionally allow the use of water from the CITY OF POINT COMFORT, TEXAS for residential, commercial, industrial, agricultural, governmental, or any other purpose in a manner contrary to any provision of this Plan, or in an amount in excess of that permitted by the drought response stage in effect at the time pursuant to action taken by Mayor, or his/her designee, in accordance with provisions of this Plan.
- (b) Any person who violates this Plan is guilty of a misdemeanor and, upon conviction shall be punished by a fine of not less than TWO HUNDRED dollars (\$200.00) and not more than FIVE HUNDRED dollars (\$500.00). Each day that one or more of the provisions in this Plan is violated shall constitute a separate offense. If a person is convicted of three or more



distinct violations of this Plan, the Mayor, or his/her designee shall, upon due notice to the customer, be authorized to discontinue water service to the premises where such violations occur. Services discontinued under such circumstances shall be restored only upon payment of a re-connection charge, hereby established at \$50.00, and any other costs incurred by the CITY OF POINT COMFORT, TEXAS in discontinuing service. In addition, suitable assurance must be given to the Mayor, or his/her designee that the same action shall not be repeated while the Plan is in effect. Compliance with this plan may also be sought through injunctive relief in the district court.

- (c) Any person, including a person classified as a water customer of the CITY OF POINT COMFORT, TEXAS, in apparent control of the property where a violation occurs or originates shall be presumed to be the violator, and proof that the violation occurred on the person's property shall constitute a rebuttable presumption that the person in apparent control of the property committed the violation, but any such person shall have the right to show that he/she did not commit the violation. Parents shall be presumed to be responsible for violations of their minor children and proof that a violation, committed by a child, occurred on property within the parents' control shall constitute a rebuttable presumption that the parent committed the violation, but any such parent may be excused if he/she proves that he/she had previously directed the child not to use the water as it was used in violation of this Plan and that the parent could not have reasonably known of the violation.
- (d) Any employee of the CITY OF POINT COMFORT, TEXAS, police officer, or other employee designated by the Mayor, may issue a citation to a person he/she reasonably believes to be in violation of this Ordinance. The citation shall be prepared in duplicate and shall contain the name and address of the alleged violator, if known, the offense charged, and shall direct him/her to appear in the municipal court on the date shown on the citation for which the date shall not be less than 3 days nor more than 5 days from the date the citation was issued. The alleged violator shall be served a copy of the citation. Service of the citation shall be complete upon delivery of the citation to the alleged violator, to an agent or employee of a violator, or to a person over 14 years of age who is a member of the violator's immediate family or is a resident of the violator's residence. The alleged violator shall appear in municipal court to enter a plea of guilty or not guilty for the violation of this Plan. If the alleged violator fails to appear in municipal court, a warrant for his/her arrest may be issued. A summons to appear may be issued in lieu of an arrest warrant. These cases shall be expedited and given preferential setting in municipal court before all other cases.

## **Section XI: Variances**

The Mayor, or his/her designee, may, in writing, grant temporary variance for existing water uses otherwise prohibited under this Plan if it is determined that failure to grant such variance would cause an emergency condition adversely affecting the health, sanitation, or fire protection for the public or the person requesting such variance 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.

Persons requesting an exemption from the provisions of this Ordinance shall file a petition for variance with the CITY OF POINT COMFORT, TEXAS within 5 days after the Plan or a particular drought response stage has been invoked. All petitions for variances shall be reviewed by the Mayor, or his/her designee, and shall include the following:

- (a) Name and address of the petitioner(s).
- (b) Purpose of water use.
- (c) Specific provision(s) of the Plan from which the petitioner is requesting relief.
- (d) Detailed statement as to how the specific provision of the Plan adversely affects the petitioner or what damage or harm will occur to the petitioner or others if petitioner complies with this Ordinance.
- (e) Description of the relief requested.
- (f) Period of time for which the variance is sought.
- (g) Alternative water use restrictions or other measures the petitioner is taking or proposes to take to meet the intent of this Plan and the compliance date.
- (h) Other pertinent information.

RESOLUTION NO. 2002- 008

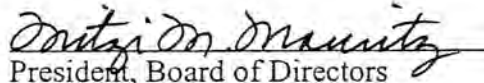
RESOLUTION APPROVING ADDENDUM TO AUTHORITY'S JANUARY 2000,  
WATER CONSERVATION AND DROUGHT CONTINGENCY PLAN


BE IT RESOLVED that the Addendum to Authority's January 2000, Water Conservation and Drought Contingency Plan, attached hereto, is hereby approved.

BE IT FURTHER RESOLVED, the General Manager or his designee is authorized to file such Addendum with the appropriate state regulatory agencies.

BE IT FURTHER RESOLVED, that the General Manager, and staff be, and they are hereby authorized to do all things necessary and proper to carry out the intent and purpose of this resolution.

Passed and approved this 20<sup>th</sup> day of February, 2002.

  
\_\_\_\_\_  
President, Board of Directors  
Lavaca-Navidad River Authority

ATTEST:  
  
\_\_\_\_\_  
Secretary-Treasurer, Board of Directors  
Lavaca-Navidad River Authority





## **LAVACA-NAVIDAD RIVER AUTHORITY WATER CONSERVATION PLAN ADDENDUM**

### **Introduction**

The following information is to be incorporated into the existing January 2000 Lavaca-Navidad River Authority (LNRA) Water Conservation and Drought Contingency Plan (Chapter II, Section 2.0 Water Conservation Goals; and Section 8.0 Customer Conservation Strategies) in order to meet state requirements for Water Conservation Plans (WCPs) for Wholesale Water Suppliers. These requirements are detailed in Texas Administrative Code Rules - Title 30/Part1/Chapter 288/ Subchapter A, which are available on the TNRCC's website (<http://www.tnrcc.state.tx.us/oprd/index.html>), under "View Rules". *Appendix A* contains an excerpt from the TAC Rules for the water conservation plan requirements that are addressed in this document.

As a wholesale water supplier, in accordance with state law, LNRA must require its wholesale customers to prepare TNRCC-approved water conservation plans. Wholesale customers include the City of Corpus Christi (CCC), the City of Point Comfort, Formosa Plastics, Inteplast Corporation, Calhoun County Navigation District (CCND), and American Electric Power (AEP; formerly CP&L). The LNRA currently provides its wholesale customers with advice and assistance in preparing their individual WCPs (review, comment, sources of useful information).

The purpose of this addendum is to quantify the measurable reduction in municipal and industrial water use by the wholesale customers that is projected to occur over the next 50 years and the resources that will be used to achieve these reductions. The LNRA will adopt the goals stated in this addendum and they will assist their customers in achieving these goals.

### **Existing Water Supplies and Demands**

The LNRA currently holds a water rights permit from the TNRCC for a total of 79,000 acre-feet per year (ac-ft/yr) firm yield water from Lake Texana. LNRA has the following contracts to sell that water to municipal and industrial customers: CCC = 31,440 ac-ft/yr (and 10,400 ac-ft/yr on a

temporary basis until the water is needed to meet future demands in Jackson County); City of Point Comfort = 178 ac-ft/yr; Formosa Plastics = 30,000 ac-ft/yr; Inteplast Corp. = 1,832 ac-ft/yr; CCND = 594 ac-ft/yr; AEP = 56 ac-ft/yr. These contracts total 74,500 ac-ft/yr; the remaining 4,500 ac-ft of supply has been contracted to the City of Corpus Christi on an interruptible basis and is diverted to the City of Corpus Christi when the reservoir pool elevation is at or above elevation 43' MSL. (See *Table I*)

Formosa Plastics currently uses approximately 56% of its contract allocation of 30,000 acre-feet per year. Formosa has implemented a highly successful program of water conservation through water reuse. Formosa is currently contemplating allowing the City of Corpus Christi to utilize 10,000 ac-ft/yr of their unused contractual water on a short-term basis. Plant process water at Formosa Plastics is reused until the Total Dissolved Solids (TDS) concentration exceeds the plant process requirements. At this point, the process water is treated and discharged; and additional makeup water is introduced into the recycle stream.

Inteplast Corporation also has a significant water reuse program. Process water is reused by Inteplast until the TDS concentration increases to an unacceptable level and it becomes more cost effective to clean and discharge the waste stream.

The City of Corpus Christi currently obtains raw water from Choke Canyon Reservoir, Lake Corpus Christi, and Lake Texana (firm and interruptible supplies). The CCC uses the interruptible supply from Lake Texana first when possible, in increments as available. This interruptible supply is available approximately 87% of the time. The CCC serves a significant industrial demand along its port area, and the scarcity of water available to the CCC in past years has driven these industries to a high level of conservation in order for them to continue to operate during periods of shortage. The CCC also encourages the use of reclaimed water, but has not promoted this effort as aggressively as other cities because of return flow requirements to the Nueces River Estuary included in the Certificate of Adjudication issued for the construction of the Choke Canyon Dam and Reservoir.

At this time, the AEP and the CCND are not utilizing their contracted industrial water allocations and they do not have water delivery systems constructed from Lake Texana. As a result, there

are no existing conservation plans for these entities and conservation plans will only be required by LNRA when they begin taking their contract water.

The LNRA's permitted firm yield water is fully contractually committed and there is no available firm-yield water left in the basin. Therefore, the LNRA is currently applying for a new amendment to the existing water rights permit with the TNRCC that will allow it to sell an additional supply of 7,500 ac-ft of water per year on an interruptible basis to the City of Corpus Christi. This interruptible supply is available less frequently than the instream flow reserve discussed previously. As a part of this amendment process, the LNRA will incorporate this addendum into the Authority's existing Water Conservation Plan. The LNRA's existing WCP was included in the SB1 Lavaca-Navidad Regional Water Plan (Region P) in December 2000.

#### **Unaccounted-for-Water**

The LNRA operates two raw water delivery systems from Lake Texana. The East Delivery System is wholly owned by the LNRA; however, the City of Corpus Christi owns the delivery pipeline for the West Delivery System starting at LNRA's property line. Currently the East Delivery System has no unaccounted-for-water between the pump station and the customer delivery point. The West Delivery System has experienced and corrected several waterline breaks in the past few years; however, the system losses have remained negligible.

#### **Problem Identification**

The LNRA's wholesale customers have both short-term and long-term water needs based on the most recent Regional Planning work (see January 2001 Adopted Regional Water Plans for Region N and Region P for specific customer information). Part of the LNRA's Water Conservation Plan is to identify conservation methods as well as to develop additional interruptible water supplies in the Lavaca River Basin that can be used to help meet the needs of their customers.

### **Water Conservation Goals**

The LNRA has both municipal and industrial water conservation goals for their wholesale customers, which include:

1. Decreasing and maintaining per capita water usage below the average of the previous five years consumption for cities situated in the central climatological region of the state. Currently, this average water consumption is 165 gallons per capita per day (gpcd).
2. Limiting unaccounted-for-water from the customer's water distribution systems to no more than 15 percent of the volume of water delivered, based on a moving five-year average.
3. Limiting unaccounted-for-water from the LNRA's water delivery systems to no more than 10 percent of the volume of water delivered to their wholesale customers, based on a moving five-year average.
4. Reducing industrial water consumption 20% - 40% through the implementation and increased use of wastewater reuse/recycle programs.
5. Providing all wholesale customers advice and assistance in preparing their individual Water Conservation Plans (the LNRA will review, comment, and provide sources of useful information).
6. Assisting the Region P Regional Water Planning Group in completing/implementing the Lavaca Regional Water Plan.
7. Pass-through water conservation goals (a measurable goal for per capita water use for municipalities and a range of percent of total demand met by reuse for industrial entities) will be negotiated as a part of each wholesale water customer's contract with the LNRA upon modification or extension.

### **Water Conservation Methods**

The LNRA does not own or control any of the internal distributions systems of its wholesale water customers; therefore the LNRA cannot mandate customer conservation methods. Each wholesale customer employs Best Management Practices (BMPs) to ensure the maximum economic benefit will be realized for their business and/or individual retail water customers.

The LNRA does lend its full support to its customers in their conservation plans and has included the methods listed in those plans for achieving conservation goals.

Methods to be employed for achieving the customer's stated water conservation goals include leak detection and repair programs, plumbing and landscape ordinances, public education programs, cost-based water rate structures, and reuse/recycling of wastewater and greywater.



Measures to determine and control unaccounted-for-water should include:

1. Metering water from fire hydrants used for construction purposes on a temporary basis.
2. The Fire Department should report to the Water Department estimated flow times from fire hydrants either during fires or as part of the hydrants testing program.
3. Water department crews should provide timely responses to leaks and estimate the volume of water lost.
4. Water department crews should estimate the volume of water discharged as part of a main-flushing program.
5. When retail water accounts are closed, water service is currently turned off at the meter. If it is anticipated that the building will be vacant for an extended period or if there is evidence of unauthorized water use the meter should be removed.

Plumbing and Landscape Ordinances that promote water conservation should be implemented.

Examples include:

1. Requiring water saving plumbing fixtures for all new construction.
2. Requiring the use of drip irrigation systems in certain circumstances, such as any irrigation system designed to irrigate vegetation located within the following areas - in the right-of-way (ROW) between the curb and sidewalk; within five feet of the paved surface of the ROW where there is no sidewalk; narrow strips of vegetation less than five feet wide between the sidewalk or curb and the parking lot; narrow strips of vegetation less than five feet wide within a parking lot; any median or traffic island which is less than five feet wide.
3. Requiring the use of Xeriscaping and drought tolerant plant species in commercial development landscaping.

Aggressive Leak Detection and Repair programs should be implemented for all water distribution systems. Citizens as well as city employees from other departments should be encouraged to promptly report any leaks. City personnel such as meter readers, solid waste collectors, and street maintenance workers, as well as those from other utility departments (Wastewater, Gas, and Stormwater) that routinely travel throughout a city make the most effective leak detectors. A 24-hour, 365-day dispatching service should be provided to assure rapid response, as well as work crews that are devoted exclusively to repairing leaks. Crews normally assigned to construction of new water mains can, in emergency situations, augment these crews. The leak repair crews should be on duty for two daily eight-hour shifts. The remaining eight hours should have a crew that is on pager call to respond. The city's goal should be to respond to any leak within four hours of it being reported. In order to maintain the integrity

of the distribution system, the city should also budget for water main replacement. The operating budget should provide for replacing lines that have a high leak incidence or are the very oldest lines. The capital improvements budget should provide for system replacements and upgrades associated with other improvements such as major street reconstruction projects.

Educational Programs should be implemented to inform retail water customers of the need to conserve water and the available methods for attaining this goal. The three basic components of an educational program are media campaigns, school programs, and public exhibitions. Media campaigns include local TV and radio stations advertisements; handouts mailed to provide information on water conservation issues, such as Xeriscape and simple water conserving tips; printed newspaper and billboard advertisements. Establish a telephone Water Hotline to encourage public access to water conservation information. Customers can utilize a dedicated telephone line to request water conservation kits and other information. Establish school programs to teach children water conservation concepts through various school-related activities. School programs target young water consumers who will hopefully retain a water-use ethic into their adult life. Children also have direct contact with their parents and may have a better opportunity to influence their behavior than traditional advertising campaigns. The City of Corpus Christi currently has the following school programs implemented – “Major Rivers Educational Program”, “Water Conservation Fair; Xeriscape- A Water Wise Educational Program”, “Toilet Training- It's Not Just for Kids”, “Learning to be Water Wise”, “The Water Source Book”, water-conservation school book covers, and the “Teacher Outreach - Super Saturday Workshop”. Public Water Conservation Exhibitions should include information booths set up by the city’s water conservation department at various public events throughout the year. Staff distributes practical literature on learning to read water meters, xeriscape planning, rainwater harvesting, and other water conservation issues; toilet retrofit kits and low-flow showerheads; and, promotional items such as stickers, beach balls, etc. at these events. Other exhibitions could include the establishment of an educational garden and learning center that teaches the seven principles of Xeriscape and beneficial horticulture practices.

Conservation-oriented water rate structures should be implemented by the LNRA’s wholesale customers for serving their retail customers. There are many ways to design this type of rate structure; however, a common rate scheme has a two-part approach consisting of:

1. A monthly minimum customer charge based on customer class and meter size; and
2. A volume charge based on water usage above the minimum base amount.

Reclaimed Wastewater Programs can be established for both municipal and industrial discharges. Municipal water and wastewater treatment plants as well as industrial process plants are well suited to incorporate reclaimed water technology. Currently, two of the LNRA's industrial wholesale customers, Formosa Plastics and Inteplast Corporation, have implemented major water reuse/recycle programs. Formosa Plastics is meeting approximately 30 percent of its current demand with reclaimed process water. The City of Corpus Christi has prepared a long-range plan for reusing effluent from its six wastewater treatment plants within their treatment processes as well as to irrigate the plants' on-site landscaping. This reclaimed water is also used to irrigate golf courses, ballpark complexes, the city landfill, etc. During drought conditions, the City has made reclaimed wastewater effluent available to other water users free of charge. Distribution sites at the treatment plants are established to allow homeowners the opportunity for obtaining treated wastewater for private use. Training and instructions are provided to ensure safe use and handling of the treated wastewater. Few owners take advantage of this service, however, primarily due to the cost of transporting the effluent. It must be noted, however, that the widespread reuse of effluent in the CCC service area is subject to the return flow limitations in the existing Nueces River watershed, so the majority of the reuse must take place with water obtained from the LNRA.

### **Summary**

The LNRA has in place valid raw water contracts with municipal and industrial wholesale customers. To varying degrees these contracts contain language relating to water conservation during drought situations. However, all of the firm-yield water in the Lavaca River Basin has already been allocated. In addition, the LNRA's largest water customer has a provision in its contract that allows 10,400 acre-feet of water to be taken out of the contract for use in Jackson County when local water demands require this additional water. It is in the best interests of all of the current customers to attain maximum utilization of all existing water supplies. To this end, while the LNRA itself has no retail water usage, it is working with all of its wholesale customers to identify their water conservation goals and practices; and is committed to assist them in their efforts. Consistent with TNRCC rules the LNRA will require its customers, as part

of future contract extensions and modifications, to provide conservation goals for inclusion into the LNRA's Water Conservation Plan.



Table 1: Water Supplies and Demands in the Lavaca-Navidad River Basin <sup>1</sup>

Entity		Contract Water Use	Contract Type	Contract Volume <sup>5</sup> (ac-ft/yr)	Current Demand <sup>3</sup> (ac-ft/yr)	Unused Contract Volume	Water Source	Water Conservation Plan <sup>4</sup>
1	Lavaca-Navidad River Authority (LNRA)	Supplier	Water Rights Permit	79,000	-	-	Lake Texana, firm yield	Jan-00
	LNRA	Supplier	Pending WR Permit Amendment <sup>2</sup>	7,500	-	-	Lake Texana, interruptible	
2	City of Corpus Christi	Municipal	Longterm	(31,400)	(31,400)	0	Lake Texana, firm yield	Aug-99
	City of Corpus Christi	Municipal	Temporary	(10,440)	(10,440)	0	Lake Texana, firm yield	
	City of Corpus Christi	Municipal	Longterm	(4,500)	(4,500)	0	Lake Texana, interruptible	
	City of Corpus Christi	Municipal	Pending <sup>2</sup>	(7,500)	0	0	Lake Texana, interruptible	
3	City of Point Comfort	Municipal	Longterm	(178)	(178)	0	Lake Texana, firm yield	Aug-95
4	Formosa Plastics	Industrial	Longterm	(30,000)	(17,000)	13,000	Lake Texana, firm yield	will be required at next contract renewal/amendment
5	Inteplast	Industrial	Longterm	(1,832)	(476)	1,356	Lake Texana, firm yield	will be required at next contract renewal/amendment
6	Calhoun Cty Navigation District (CCND)	Industrial	Longterm	(594)	0	594	Lake Texana, firm yield	Not Needed
7	American Electric Power (AEP)	Industrial	Longterm	(56)	0	56	Lake Texana, firm yield	Not Needed
8	TNRCC Instream Flows	Environmental	Longterm	(4,500)	-	-	Lake Texana, firm yield	Not Needed
Existing Water Rights Supply Total				79,000				
Pending Future (Additional Only) Supply Total				7,500				
Existing Contracted Demand Total				(79,000)	(63,994)	15,006		
Pending Future (Additional Only) Demand Total				(7,500)				

<sup>1</sup> The data for this table was compiled from information from the LNRA and the existing LNRA January 2000 WCP

<sup>2</sup> The LNRA is currently applying to the TNRCC for a Water Rights Permit Amendment for an additional 7,500 ac-ft/yr of interruptible water supply.

<sup>3</sup> Formosa Plastics & CCND are currently contemplating allowing Corpus Christi to use 10,000 ac-ft & 594 ac-ft of water per year, respectively, on a short-term basis.

<sup>4</sup> A Water Conservation Plan is not needed for CCND or AE&P because they are not currently using their water allocation and do not have a water delivery system in place.

<sup>5</sup> Water Supplies are represented as + numbers; Demands are represented as (-) numbers; Pending supplies/demands are italicized.

## APPENDIX A APPLICABLE TAC RULES

This addendum contains information to satisfy the TNRCC's WCP requirements as presented in the Texas Administrative Code. Specifically, TAC Title 30/Part1/Chapter 288/Subchapter A/Rule 288.5/(1)(B), (1)(C), (1)(H), (1)(I), and (2):

A water conservation plan for a wholesale water supplier shall provide information, where applicable, in response to each of the following paragraphs.

(1) Minimum requirements. All water conservation plans for wholesale water suppliers shall 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) specification of conservation goals including, where appropriate, target per capita water use goals for the wholesaler's service area, maximum acceptable unaccounted-for water, the basis for the development of said goals, and a time frame for achieving those goals;**

**(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**

**(I) documentation of coordination with the Regional Water Planning Groups for the service area of the wholesale water supplier in order to insure 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 customers in the development of conservation pollution prevention and abatement plans;
- (C) a program for reuse and/or recycling of wastewater and/or greywater; 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.

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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



DROUGHT CONTINGENCY PLAN  
FOR THE  
CITY OF PORT LAVACA

APRIL 7, 2003

Section I: Declaration of Policy, Purpose, and Intent

In order to conserve the available water supply and 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 City of Port Lavaca hereby adopts the following regulations and restrictions on the delivery and consumption of water.

Water uses regulated or prohibited under this Drought Contingency Plan (the Plan) are considered to be non-essential and continuation of such uses during times of water shortage or other emergency water supply condition are deemed to constitute a waste of water which subjects the offender(s) to penalties as defined in Section XI of this Plan.

Section II: Public Involvement

Opportunity for the public to provide input into the preparation of the Plan was provided by the City of Port Lavaca by means of a notice to the customers on *their monthly water bill* and a Public Notice in the Port Lavaca Wave, an area newspaper.

Section III: Public Education

The City of Port Lavaca will periodically provide the public 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 utility bill inserts or a public notice in the Port Lavaca Wave.

#### Section IV: Coordination with Regional Water Planning Groups

The service area of the City of Port Lavaca is located within the South Central Texas Regional Water Planning Group (Region L) and the City of Port Lavaca has provided a copy of this Plan to SCTRWPG.

#### Section V: Authorization

The City Manager for the City of Port Lavaca (hereinafter City Manager) 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 City Manager, or his/her designee, shall have the authority 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 persons, customers, and property utilizing water provided by the City of Port Lavaca. The terms "person" and "customer" as used in the Plan include individuals, corporations, partnerships, associations, and all other legal entities.

#### Section VII: Definitions

For the purposes of this Plan, the following definitions shall apply:

**Aesthetic water use:** water use for ornamental or decorative purposes such as fountains, reflecting pools, and water gardens.

**Commercial and institutional water use:** water use which is integral to the operations of commercial and non-profit establishments and governmental entities such as retail establishments, hotels and motels, restaurants, and office buildings.

**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 supply is conserved and made available for future or alternative uses.

**Customer:** any person, company, or organization using water supplied by the City of Port Lavaca.

**Domestic water use:** water use for personal needs or for household or sanitary purposes such as drinking, bathing, heating, cooking, sanitation, or for cleaning a residence, business, industry, or institution.

**Even number address:** street addresses, box numbers, or rural postal route numbers ending in 0, 2, 4, 6, or 8 and locations without addresses.

**Industrial water use:** the use of water in processes designed to convert materials of lower value into forms having greater usability and value.



Landscape irrigation use: water used for the irrigation and maintenance of landscaped areas, whether publicly or privately owned, including residential and commercial lawns, gardens, golf courses, parks, and rights-of-way and medians.

Non-essential water use: water uses that are not essential nor required for the protection of public, health, safety, and welfare, including:

- (a) irrigation of landscape areas, including parks, athletic fields, and golf courses, except otherwise provided under this Plan;
- (b) use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle;
- (c) use of water to wash down any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas;
- (d) use of water to wash down buildings or structures for purposes other than immediate fire protection;
- (e) flushing gutters or permitting water to run or accumulate in any gutter or street;
- (f) use of water to fill, refill, or add to any indoor or outdoor swimming pools or jacuzzi-type pools;
- (g) use of water in a fountain or pond for aesthetic or scenic purposes except where necessary to support aquatic life;
- (h) failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s); and
- (i) use of water from hydrants for construction purposes or any other purposes other than fire fighting.

Odd numbered address: street addresses, box numbers, or rural postal route numbers ending in 1, 3, 5, 7, or 9.

#### Section VIII: Criteria for Initiation and Termination of Drought Response Stages

The City Manager or his/her designee shall monitor water supply and/or demand conditions on a daily basis and shall determine when conditions warrant initiation or termination of each stage of the Plan, that is, when the specified “triggers” are reached.

The triggering criteria described below are based on information provided to the City of Port Lavaca by the Guadalupe Blanco River Authority (GBRA) Port Lavaca Water Treatment Plant Division. GBRA supplies all the treated drinking water to the City of Port Lavaca.

Water for GBRA’s customers are secured by run-of-river water rights granted GBRA or by storage rights owned by GBRA in Canyon Dam and Reservoir near New Braunfels, Texas. If drought or

demand conditions fully engage all of the available GBRA run-of-river water supply, and the water demand continues to increase, then the further water demand will be satisfied by Canyon stored water rights. The Water Supply Division of GBRA, in coordination with the TCEQ Watermaster for the Guadalupe river, will determine when these trigger demand points occur, and will inform all GBRA customers affected.

#### Stage 1 Triggers -- MILD Water Shortage Conditions

##### Requirements for initiation

Customers shall be requested to voluntarily conserve water and adhere to the prescribed restrictions on certain water uses, defined in Section VII - Definitions, when the City of Port Lavaca has received notification from GBRA that they have begun operating the Barrier at river mile 10 on the Guadalupe River in order to raise the normal pool level immediately upstream of the Barrier to an elevation sufficient for the efficient diversion of water through the outtake structure. Operation of the Barrier at river mile 10 will be based on:

Demand of all GBRA and other permitted customers for surface water

Available surface water flow from the Guadalupe River and its tributaries at river mile 10.

##### Requirements for termination

Stage 1 of the Plan may be rescinded upon notification by GBRA that the operation of the Barrier to raise the pool level has ceased.

#### Stage 2 Triggers -- MODERATE Water Shortage Conditions

##### Requirements for initiation

Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses provided in Section IX of this Plan upon notification from GBRA that Stage I conditions are active and in addition, no flow over the Barrier and downstream toward the mouth of the river is occurring.

##### Requirements for termination

Stage 2 of the Plan may be rescinded upon notification by GBRA that the triggering event (no flow over the Barrier) has ceased. Stage I (Mild Water Shortage Conditions) will go into effect at this time.

#### Stage 3 Triggers -- SEVERE Water Shortage Conditions

##### Requirements for initiation

Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses for Stage 3 of this Plan when Stage 1 and Stage 2 conditions are active and in addition:



The release of stored water from Canyon Dam to meet demand in Calhoun County is being executed by GBRA, to supplement its run-of-the river permitted supply available at the Barrier.

#### Requirements for termination

Stage 3 of the Plan may be rescinded when the triggering event (the release of stored water for Calhoun County customers from Canyon Dam) ceases. Stage 2 conditions go into effect upon termination of Stage 3.

#### Stage 4 Triggers -- CRITICAL Water Shortage Conditions

##### Requirements for initiation

Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses for Stage 4 of this Plan when Stage 3 conditions are active and, in addition, all customer demand in Calhoun County is being met by the permitted release of stored water in Canyon Dam. The initiation of Stage 4 will also depend on:

The cessation of flow from one or both of the two major springs, Comal and San Marcos Springs (equivalent to the drought of record).

Encroachment of salt water from San Antonio bay toward the Barrier.

##### Requirements for termination

Stage 4 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist. Upon termination of Stage 4, Stage 3 becomes operative.

#### Stage 5 Triggers -- EMERGENCY Water Shortage Conditions

##### Requirements for initiation

Customers shall be required to comply with the requirements and restrictions for Stage 5 of this Plan when the City Manager, or his/her designee, determines that a water supply emergency exists based on:

Major water line breaks, or pump or system failures occur, which cause unprecedented loss of capability to provide water service; or

Natural or man-made contamination of the water supply source(s).

##### Requirements for termination

Stage 5 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of 3 consecutive days.

#### Stage 6 Triggers -- WATER ALLOCATION

##### Requirements for initiation

In accordance with TCEQ/TWDB Drought Contingency Planning Handbook guidelines, a water allocation policy is not required for any system that will not, based upon historical analysis, experience a water supply shortage during the drought of record.

#### Section IX: Drought Response Stages

The City Manager, or his/her designee, shall monitor water supply and/or demand conditions on a daily basis and, in accordance with the triggering criteria set forth in Section VIII of this Plan, shall determine that a mild, moderate, severe, critical, emergency or water shortage condition exists and shall implement the following notification procedures:

##### Notification

Notification of the Public:

The City Manager or his/ here designee shall notify the public by means of:

- Publication in the local newspaper
- Public service announcements
- Postings on the City Web Pages

Additional Notification:

The City Manager or his/ her designee shall notify directly, or cause to be notified directly, the following individuals and entities:

- Mayor and members of the City Council
- Fire Chief
- County Judge & Commissioner(s)
- TCEQ Corpus Christi Regional Office
- Major water customers

#### Stage 1 Response – MILD Water Shortage Conditions

Goal: Achieve a voluntary 10% percent reduction in total water use.

Supply Management Measures:

Reduced flushing of water mains.

Voluntary Water Use Restrictions:

- (a) Water customers are requested to voluntarily limit the irrigation of landscaped areas to Sundays and Thursdays for customers with a street address ending in an even number (0, 2, 4, 6 or 8), and Saturdays and Wednesdays for water customers with a street address ending in an odd number (1, 3, 5, 7 or 9), and to irrigate landscapes only

between the hours of midnight and 10:00 a.m. and 8:00 p.m. to midnight on designated watering days.

- (b) All operations of the City of Port Lavaca shall adhere to the same water use restrictions.
- (c) Water customers are requested to practice water conservation and to minimize or discontinue water use for non-essential purposes.

#### Stage 2 Response – MODERATE Water Shortage Conditions

Goal: Achieve a 15% reduction in total domestic water use.

#### Supply Management Measures:

See Stage I. Also reduced irrigation of public landscaped areas.

Water Use Restrictions. Under threat of penalty for violation, the following water use restrictions shall apply to all persons:

- (a) Irrigation of landscaped areas with hose-end sprinklers or automatic irrigation systems shall be limited to Sundays and Thursdays for customers with a street address ending in an even number (0, 2, 4, 6 or 8), and Saturdays and Wednesdays for water customers with a street address ending in an odd number (1, 3, 5, 7 or 9), and irrigation of landscaped areas is further limited to the hours of 12:00 midnight until 10:00 a.m. and between 8:00 p.m. and 12:00 midnight on designated watering days. However, irrigation of landscaped areas is permitted at anytime if it is by means of a hand-held hose, a faucet filled bucket or watering can of five (5) gallons or less, or drip irrigation system.
- (b) Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle is prohibited except on designated watering days between the hours of 12:00 midnight and 10:00 a.m. and between 8:00 p.m. and 12:00 midnight. Such washing, when allowed, shall be done with a hand-held bucket or a hand-held hose equipped with a positive shutoff nozzle for quick rises. Vehicle washing may be done at any time on the immediate premises of a commercial car wash or commercial service station. Further, such washing may be exempted from these regulations if the health, safety, and welfare of the public is contingent upon frequent vehicle cleansing, such as garbage trucks and vehicles used to transport food and perishables.
- (c) Use of water to fill, refill, or add to any indoor or outdoor swimming pools, wading pools, or jacuzzi-type pools is prohibited except on designated watering days between the hours of 12:00 midnight and 10:00 a.m. and between 8 p.m. and 12:00 midnight.
- (d) Operation of any ornamental fountain or pond for aesthetic or scenic purposes is prohibited except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.

- (e) 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 City of Port Lavaca.
- (f) Use of water for the irrigation of golf course greens, tees, and fairways is prohibited except on designated watering days between the hours 12:00 midnight and 10:00 a.m. and between 8 p.m. and 12:00 midnight. However, if the golf course utilizes a water source other than that provided by the City of Port Lavaca, the facility shall not be subject to these regulations.
- (g) All restaurants are prohibited from serving water to patrons except upon request of the patron.
- (h) The following uses of water are defined as non-essential and are prohibited:
  - 1. wash down of any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas;
  - 2. use of water to wash down buildings or structures for purposes other than immediate fire protection;
  - 3. use of water for dust control;
  - 4. flushing gutters or permitting water to run or accumulate in any gutter or street; and
  - 5. failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s).

### Stage 3 Response – SEVERE Water Shortage Conditions

Goal: Achieve a 20% reduction in total domestic water use.

#### Supply Management Measures:

See Stage 2. Eliminate the flushing of all water mains except for decontamination purposes, Discontinue irrigation of public landscaped areas and all water use for street sweeping.

Water Use Restrictions . All requirements of Stage 2 shall remain in effect during Stage 3 except:

- (a) Irrigation of landscaped areas shall be limited to designated watering days between the hours of 12:00 midnight and 10:00 a.m. and between 8 p.m. and 12:00 midnight and shall be by means of hand-held hoses, hand-held buckets, drip irrigation, or permanently installed automatic sprinkler system only. The use of hose-end sprinklers is prohibited at all times.
- (b) The watering of golf course tees is prohibited unless the golf course utilizes a water

source other than that provided by the City of Port Lavaca.

- (c) The use of water for construction purposes from designated fire hydrants under special permit is to be discontinued.

#### Stage 4 Response -- CRITICAL Water Shortage Conditions

Goal: Achieve a 20% reduction in total water use.

##### Supply Management Measures:

See Stage 3. Upon implementation of Stage 4 the City of Port Lavaca, upon having issued written notice, will disconnect the water services of willful violators if necessary to prevent the deliberate wasting of water.

**Water Use Restrictions.** All requirements of Stage 2 and 3 shall remain in effect during Stage 4 except:

- (a) Irrigation of landscaped areas shall be limited to designated watering days between the hours of 6:00 a.m. and 10:00 a.m. and between 8:00 p.m. and 12:00 midnight and shall be by means of hand-held hoses, hand-held buckets, or drip irrigation only. The use of hose-end sprinklers or permanently installed automatic sprinkler systems are prohibited at all times.
- (b) Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle not occurring on the premises of a commercial car wash and commercial service stations and not in the immediate interest of public health, safety, and welfare is prohibited. Further, such vehicle washing at commercial car washes and commercial service stations shall occur only between the hours of 6:00 a.m. and 10:00 a.m. and between 6:00 p.m. and 10 p.m.
- (c) The filling, refilling, or adding of water to swimming pools, wading pools, and jacuzzi-type pools is prohibited.
- (d) Operation of any ornamental fountain or pond for aesthetic or scenic purposes is prohibited except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.
- (e) No application for new, additional, expanded, or increased-in-size water service connections, meters, service lines, pipeline extensions, mains, or water service facilities of any kind shall be approved, and time limits for approval of such applications are hereby suspended for such time as this drought response stage or a higher-numbered stage shall be in effect.

#### Stage 5 Response -- EMERGENCY Water Shortage Conditions

Goal: Achieve a 50% percent reduction in total water use.

##### Supply Management Measures:

See Stage 4. Notify the Port Lavaca Fire Department and Calhoun County Emergency Management Coordinator. Contact the top 10 water customers and coordinate the usage of water in accordance with their respective needs.

Water Use Restrictions. All requirements of Stage 2, 3, and 4 shall remain in effect during Stage 5 except:

- (a) Irrigation of landscaped areas is absolutely prohibited.
- (b) Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle is absolutely prohibited.

#### Stage 6 Response – WATER ALLOCATION

In the event that water shortage conditions threaten public health, safety, and welfare, the City Manager is hereby authorized to allocate water according to the following water allocation plan:

##### Single-Family Residential Customers

The allocation to residential water customers residing in a single-family dwelling shall be as follows:

Persons per Household	Gallons per Month
1 or 2	6,000
3 or 4	7,000
5 or 6	8,000
7 or 8	9,000
9 or 10	10,000
11 or more	12,000

*“Household”* means the residential premises served by the customer’s meter. “Persons per household” includes only those persons currently physically residing at the premises and expected to reside there for the entire billing period. It shall be assumed that a particular customer’s household is comprised of two (2) persons unless the customer notifies the City of Port Lavaca of a greater number of persons per household on a form prescribed by the City Manager. The City Manager shall give his/her best effort to see that such forms are mailed, otherwise provided, or made available to every residential customer. If, however, a customer does not receive such a form, it shall be the customer’s responsibility to go to the City of Port Lavaca offices to complete and sign the form claiming more than two (2) persons per household. New customers may claim more persons per household at the time of applying for water service on the form prescribed by the City Manager. When the number of persons per household increases so as to place the customer in a different allocation category, the customer may notify the City of Port Lavaca on such form and the change will be implemented in the next practicable billing period. If the number of persons in a household is reduced, the customer shall notify the City of Port Lavaca in writing within two (2) days. In prescribing the method for claiming more than two (2) persons per household, the City Manager shall adopt methods to insure the accuracy of the claim. Any person who knowingly, recklessly, or with

criminal negligence falsely reports the number of persons in a household or fails to timely notify the City of Port Lavaca of a reduction in the number of person in a household shall be two hundred dollars (\$200).

Residential water customers shall pay the following surcharges:

Up to the threshold amounts, the monthly bill will be calculated in the normal manner. Over and above the threshold amounts indicated above, an additional 50% will be calculated for the existing block rate (the amount typically paid per 1000 gallons for all water used above the monthly minimum) per thousand gallon increment.

Surcharges shall be cumulative.

#### Master-Metered Multi-Family Residential Customers

The allocation to a customer billed from a master meter which jointly measures water to multiple permanent residential dwelling units (e.g., apartments, mobile homes) shall be allocated 6,000 gallons per month for each dwelling unit. It shall be assumed that such a customer's meter serves two dwelling units unless the customer notifies the City of Port Lavaca of a greater number on a form prescribed by the City Manager. The City Manager shall give his/her best effort to see that such forms are mailed, otherwise provided, or made available to every such customer. If, however, a customer does not receive such a form, it shall be the customer's responsibility to go to the City of Port Lavaca offices to complete and sign the form claiming more than two (2) dwellings. A dwelling unit may be claimed under this provision whether it is occupied or not. New customers may claim more dwelling units at the time of applying for water service on the form prescribed by the City Manager. If the number of dwelling units served by a master meter is reduced, the customer shall notify the City of Port Lavaca in writing within two (2) days. In prescribing the method for claiming more than two (2) dwelling units, the City Manager shall adopt methods to insure the accuracy of the claim. Any person who knowingly, recklessly, or with criminal negligence falsely reports the number of dwelling units served by a master meter or fails to timely notify the City of Port Lavaca of a reduction in the number of dwelling units served by a master meter shall be fined two hundred dollars (\$200).

Customers billed from a master meter under this provision shall pay the following monthly surcharges:

Up to the threshold amounts (6000 gallons/month/dwelling unit), the monthly bill will be calculated in the normal manner. Over and above the threshold amounts an additional 50% will be calculated for the existing block rate (the amount typically paid per 1000 gallons for all water used above the monthly minimum) per thousand gallon increment.

Surcharges shall be cumulative.

#### Commercial Customers

A monthly water allocation shall be established by the City Manager, or his/her designee, for each nonresidential commercial customer other than an industrial customer who uses water for processing purposes. The non-residential customer's allocation shall be approximately 75% of the customer's usage for corresponding month's billing period for the previous 12 months. If the customer's billing history is shorter than 12 months, the monthly average for the period for which there is a record shall



be used for any monthly period for which no history exists, but in any case not less than 6000 gallons per month. The City Manager shall give his/her best effort to see that notice of each non-residential customer's allocation is mailed to such customer. If, however, a customer does not receive such notice, it shall be the customer's responsibility to contact the City of Port Lavaca to determine the allocation. Upon request of the customer or at the initiative of the City Manager, the allocation may be reduced or increased if, (1) the designated period does not accurately reflect the customer's normal water usage, (2) one nonresidential customer agrees to transfer part of its allocation to another nonresidential 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 City Manager.

Nonresidential commercial customers shall pay the following surcharges:

Up to the threshold amounts, the monthly bill will be calculated in the normal manner. Over and above the threshold amounts an additional 50% will be calculated for the existing block rate (the amount typically paid per 1000 gallons for all water used above the monthly minimum) per thousand gallon increment.

The surcharges shall be cumulative.

#### Industrial Customers

A monthly water allocation shall be established by the City Manager, or his/her designee, for each industrial customer, which uses water for processing purposes. The industrial customer's allocation shall be approximately 90% percent of the customer's water usage baseline. Ninety (90) days after the initial imposition of the allocation for industrial customers, the industrial customer's allocation shall be further reduced to 80% percent of the customer's water usage baseline. The industrial customer's water use baseline will be computed on the average water use for the 12 month period ending prior to the date of implementation of Stage 2 of the Plan. If the industrial water customer's billing history is shorter than 12 months, 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.

The City Manager shall give his/her best effort to see that notice of each industrial customer's allocation is mailed to such customer. If, however, a customer does not receive such notice, it shall be the customer's responsibility to contact the City of Port Lavaca to determine the allocation, and the allocation shall be fully effective notwithstanding the lack of receipt of written notice. Upon request of the customer or at the initiative of the City Manager, the allocation may be reduced or increased, (1) if the designated period does not accurately reflect the customer's normal water use because the customer had shutdown a major processing unit for repair or overhaul during the period, (2) the customer has added or is in the process of adding significant additional processing capacity, (3) the customer has shutdown or significantly reduced the production of a major processing unit, (4) the customer has previously implemented significant permanent water conservation measures such that the ability to further reduce water use is limited, (5) the customer agrees to transfer part of its allocation to another industrial customer, or (6) if other objective evidence demonstrates that the designated allocation is inaccurate under present conditions. A customer may appeal an allocation established hereunder to the City Manager.

Industrial customers shall pay the following surcharges:

Up to the threshold amounts, the monthly bill will be calculated in the normal manner. Over and above the threshold amounts an additional 50% will be calculated for the existing block rate (the amount typically paid per 1000 gallons for all water used above the monthly minimum) per thousand gallon increment.

The surcharges shall be cumulative.

#### Section X: Enforcement

- (a) No person shall knowingly or intentionally allow the use of water from the City of Port Lavaca for residential, commercial, industrial, agricultural, governmental, or any other purpose in a manner contrary to any provision of this Plan, or in an amount in excess of that permitted by the drought response stage in effect at the time pursuant to action taken by the City Manager, or his/her designee, in accordance with provisions of this Plan.
- (b) Any person who violates this Plan is guilty of a misdemeanor and, upon conviction shall be punished by a fine of two hundred dollars (\$200). Each day that one or more of the provisions in this Plan is violated shall constitute a separate offense. If a person is convicted of three or more distinct violations of this Plan, the City Manager, shall, upon due notice to the customer, be authorized to discontinue water service to the premises where such violations occur. Services discontinued under such circumstances shall be restored only upon payment of a re-connection charge, as indicated in the City of Port Lavaca Water Rates and Service Ordinance, and any other costs incurred by the City of Port Lavaca in discontinuing service. In addition, suitable assurance must be given to the City Manager that the same action shall not be repeated while the Plan is in effect. Compliance with this plan may also be sought through injunctive relief in the district court.
- (c) Any person, including a person classified as a water customer of the City of Port Lavaca, in apparent control of the property where a violation occurs or originates shall be presumed to be the violator, and proof that the violation occurred on the person's property shall constitute a rebuttable presumption that the person in apparent control of the property committed the violation, but any such person shall have the right to show that he/she did not commit the violation. Parents shall be presumed to be responsible for violations of their minor children and proof that a violation, committed by a child, occurred on property within the parents' control shall constitute a rebuttable presumption that the parent committed the violation, but any such parent may be excused if he/she proves that he/she had previously directed the child not to use the water as it was used in violation of this Plan and that the parent could not have reasonably known of the violation.
- (d) Any employee of the City of Port Lavaca, police officer, or other individual designated by the City Manager, may issue a citation to a person he/she reasonably believes to be in violation of this Ordinance. The citation shall be prepared in duplicate and shall contain the name and address of the alleged violator, if known, the offense charged, and shall direct him/her to appear in municipal court on the date shown on the citation for which the date shall not be less than 3 days nor more than 5 days from the date the citation was issued. The alleged violator shall be served a copy of the citation. Service of the citation shall be complete upon delivery of the citation to the alleged violator, to an agent or employee of a violator, or to a person over 14

years of age who is a member of the violator's immediate family or is a resident of the violator's residence. The alleged violator shall appear in municipal court to enter a plea of guilty or not guilty for the violation of this Plan. If the alleged violator fails to appear in municipal court, a warrant for his/her arrest may be issued. A summons to appear may be issued in lieu of an arrest warrant. These cases shall be expedited and given preferential setting in municipal court before all other cases.

#### Section XI: Variances

The City Manager, or his/her designee, may, in writing, grant temporary variance for existing water uses otherwise prohibited under this Plan if it is determined that failure to grant such variance would cause an emergency condition adversely affecting the health, sanitation, or fire protection for the public or the person requesting such variance 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.

Persons requesting an exemption from the provisions of this Ordinance shall file a petition for variance with the City of Port Lavaca within 5 days after the Plan or a particular drought response stage has been invoked. All petitions for variances shall be reviewed by the City Manager, or his/her designee, and shall include the following:

- (a) Name and address of the petitioner(s).
- (b) Purpose of water use.
- (c) Specific provision(s) of the Plan from which the petitioner is requesting relief.
- (d) Detailed statement as to how the specific provision of the Plan adversely affects the petitioner or what damage or harm will occur to the petitioner or others if petitioner complies with this Ordinance.
- (e) Description of the relief requested.
- (f) Period of time for which the variance is sought.
- (g) Alternative water use restrictions or other measures the petitioner is taking or proposes to take to meet the intent of this Plan and the compliance date.
- (h) Other pertinent information.

Variances granted by the City of Port Lavaca shall be subject to the following conditions, unless waived or modified by the City Manager or his/her 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.



# MAYOR AND COUNCIL COMMUNICATION

CITY COUNCIL MEETING: DECEMBER 13, 2010 - REGULAR

**SUBJECT:** CONSIDER RESOLUTION #R-121310-1 FOR THE PURPOSE OF ADOPTING THE 2010 WATER CONSERVATION PLAN FOR THE CITY OF PORT LAVACA TO PROMOTE RESPONSIBLE USE OF WATER CONSUMPTION REDUCTION AS REQUIRED BY 2007 HOUSE BILL 4 OF THE TEXAS STATE LEGISLATURE

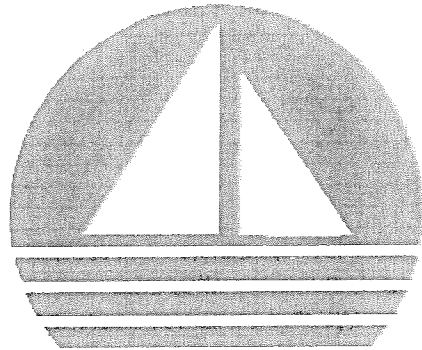
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**INFORMATION:**

AGENDA ITEM  
NUMBER 2







*CITY OF PORT LAVACA*

**WATER CONSERVATION PLAN**

City of Port Lavaca  
202 N. Virginia St.  
Port Lavaca, Texas 77979  
Phone: 361.552.9798  
Fax: 361.552.6062

December 8, 2010



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**Attachments**

Appendix A. Correspondence, Coordination, and Notification	
Appendix B. Adoption Resolution	
Appendix C. Water Conservation Utility Profile (TWDB Form WRD-264)	
Appendix D. Water and Sewer Rates (Excerpt from City Fee Schedule Ordinance)	
Appendix E. Plumbing Ordinance	
Appendix F. Water Conservation Implementation Report (TCEQ-20159)	
Exhibit A. Certificate of Convenience and Necessity and Service Area Map	

## SECTION I

### INTRODUCTION

The City of Port Lavaca is located in Calhoun County, Texas at the intersection of U.S. Highway 87 and state Highway 35. According to the 2000 Census, Port Lavaca had a population of 11,968. The City not only provides water and sewer to persons within the city limits but also those areas within the city's ETJ. Exhibit A shows the Certificate of Convenience and Necessity (CCN) and Service Area Map.

The City of Port Lavaca purchases treated water from the Guadalupe Blanco River Authority (GBRA) Water System (PWS #2460155) via a long-term water purchase contract. GBRA supplies water through treated surface water from the Guadalupe River which is located approximately 17.5 miles south of Port Lavaca. The City delivers this treated water via their distribution system (PWS #0290002) to Port Lavaca's citizens.

The wastewater treatment plant and collection system are owned and operated by the City. The current plant was constructed in 1982 and upgraded in 2004 and is permitted with the TCEQ (TPDES Permit No. WQ0010251001, EPA ID No. TX0047562). The plant has a capacity of 2.0 MGD, a permitted average annual flow of 2.0 MGD, and a peak two hour flow of 5,319 gpm (8 MGD). The wastewater collection system provides service for approximately 95% of the City's retail water customers.

The City currently has a Drought Contingency Plan adopted 6-23-2003. This document only addresses reduction in water use during emergency conditions. It is not intended to encourage on-going reduction in water use through conservation efforts. To aid the City in its efforts to conserve water and remain in compliance with the Texas Commission on Environmental Quality (TCEQ) requirements for Water Conservation Plans set forth by the amendment of the Texas Administration Code, Title 30, Chapter 288 in January 2008, the City of Port Lavaca finds that a stand-alone document outlining the water conservation efforts, goals, and updated water system data is needed.

The information found herein represents the Water Conservation Plan developed for and implemented by the City of Port Lavaca. This document had been developed, in part, in accordance with the guidelines and direction of the Texas Water Development Board (TWDB) and through consultation with City officials.

## 1. Utility Evaluation Data

In order to develop a comprehensive and effective water conservation plan, the conditions of the existing water and wastewater systems must be evaluated. The Water Conservation Utility Profile (TWBD Form WRD-264) was completed with the most updated information available. This profile is included as Appendix C. this form refers to the Certificate of Convenience and Necessity (CCN) and Service Area Map which is included as Exhibit A to this Plan.

## 2. Program Goals

The City of Port Lavaca recognizes the importance of developing an effective water conservation plan. Proper planning will help all users in the system conserve water and reduce the City's contribution to the water needs of Texas today and in future.

The City of Port Lavaca is committed to conservation to avoid waste, save costs, and conserve Texas's natural resources. The City has already accomplished many goals in its efforts to conserve water. These include installing meters at all City facilities, implementing a plan for meter replacement, and providing information on non-wasteful uses of water and techniques that can be employed to conserve water to all customers. The City has also adopted standard construction details and specifications which require proper embedment of all water lines and provides standards for all services and meters.

To further the City's progress, Port Lavaca proposes to establish the following goals for its long-term water conservation plan:

- 1) Promote water conservation, non-wasteful uses of water and techniques that can be employed to conserve water through education and information efforts that will be provided on a yearly basis.
- 2) Reduce unaccounted-for water (from the metered purchase amounts from GBRA to the metered sales) in the system from the current levels of 22% to 12%. This water loss percentage should be obtained within the next 10 years.
- 3) Maintain water meters and a water meter testing program and expand the Automatic Meter Reading (AMR) System to accurately account for water sold by City.
- 4) Establish and maintain water rate structures that promote conservation of water.

### 3. Coordination with Regional Water Planning Group

The water service area of the City of Port Lavaca is located within the South Central Texas Regional Water Planning Group (Region L). The city of Port Lavaca actively participates in the Regional water planning effort and has provided a copy of this Plan to the SCTRWPG to seek comment and insure consistency with the approved regional water plan. A copy of this correspondence is provided in Water Conservation Plan Appendix A.

### 4. Public Involvement

Opportunity for the public to provide input into the preparation of this Plan by the City of Port Lavaca in form of:

- City Council meeting seeking public comment before adoption of the Plan (see Appendix B for adoption resolution)
- Correspondence with the City's wholesale supplier- the Guadalupe Blanco River Authority (see Appendix A)

In addition, this Plan will be continually available for public review during normal business hours of the City at the City Hall located at 202 N. Virginia St., Port Lavaca, Texas 77979. Any comments received should be considered for inclusion in a revision or amendment to the Water Conservation Plan.

### 5. Plan Implementation

This Plan and Subsequent Plan elements discussed in this document were adopted by City Resolution of the City of Port Lavaca (see attached Resolution in Appendix B).





## Section II

### Long-Term Water Conservation Plan

The main goals associated with the long-term water conservation planning for the City of Port Lavaca involve maintaining a non-wasteful water rate structure, reducing unaccounted for water, maintaining city meters through testing and replacement, and providing education and information to all customers. These long-term water conservation goals can only be achieved through adherence to the following plan elements and methods.

#### 1. Education and Information

According to the document titled "Guidelines for Municipal Water Conservation and Emergency Water Demand Management" prepared by the TWDB (November 1991), statistics for municipal water uses in Texas indicate many areas in which water can be conserved or better utilized. Some of the facts about municipal water use include:

- . Seasonal use (primarily for landscaping irrigation) averages 20-30% of the total annual municipal use.
- . Single family homes often use half of the water purchased in the summer months for exterior purposes such as lawn watering car washing.
- . Residential in-home water consumption indicates that 40% is used for toilet flushing, 35% for bathing, 14% for laundry, and 11% for kitchen needs.

As can be seen from these water use facts, a great potential exists for reducing water consumption if the public is informed about water conservation practices.

Various media outlets exist for effectively communicating water conservation information. Some of these methods include television, radio, and newspaper announcements and advertisements; posters and public displays; exhibits at fairs, contests and school programs; bill inserts, brochures, pamphlets, and newsletters; and speaker's programs. The vehicle by which information is distributed is dependant on the future approaches taken by City officials in educating the public. At a minimum, the City of Port Lavaca will provide education and information on a yearly basis to all customers presenting non-wasteful uses of water and techniques that can be employed to conserve water through the following vehicles:

1. Annual Education Water Conservation Activity

The City can provide annual water conservation education through media advertisements in local newspaper or other local publication. Publication materials could include selected material from the TWDB giving water conservation strategies for residential, commercial, and industrial customers. Providing city water use data concerning variations in seasonal consumption and yearly/ monthly changes in per capita use can illustrate time periods where water conservation is the most important. Timely publications of these conservation tips during peak seasons can help initiate conservation when per capita consumption is the highest.

2. Water Conservation Literature for Customers

The City can maintain water conservation materials to customers at all times. General water conservation brochures (such as those available through the TWDB) can be mailed to each customer on an annual or biannual basis. New customer packets can also be developed as deemed appropriate and necessary by City officials. The City maintains an up-to-date website containing useful information for residents, and water conservation material can be published online to help reach a wider audience of water users.

The public education program can also include information about techniques and practices that can be employed to conserve water. Specific consideration should be given to the following:

1. Water-Conservation Landscaping (Xeriscape):  
Public education on Xeriscape should include landscaping and irrigation procedures which reduce water consumption while lowering water bills. The City can strive to provide an example by applying these procedures to public property whenever and wherever practical.
2. Retrofit Program:  
Through the education and information program, plumbers and water consumers can be encouraged to retrofit old fixtures (such as interior plumbing fixtures, lawn watering equipment, and water-using appliances) with water saving devices. The educational process should focus on the advantages of installing water conservation devices as well as the availability of these items.

## 2. Conservation-Oriented Water Rate Structures

The City maintains a rate structure as shown in Table 1, and a copy of the utility rate ordinance is found in Appendix D. Such a structure is a step towards maintaining a rate that promotes water conservation.

The flat-rate water structure used by the City applies a base charge by meter size for the first 2,000 gallons of water use and a flat charge for each 1,000 gallons thereafter. Wastewater is billed in a similar manner dependant on water use. This rate structure is more conducive to water conservation than a regressive rate structure since increasing water and sewer use is charged a flat rate instead of a declining rate.

However, the City's current rate structure is not as water conservation oriented as a progressive rate structure, where increasing water and sewer use is charged at an increasing rate. It remains the responsibility of the future City government to maintain a water conservation-oriented rate structure for their water and wastewater utilities and consider the adoption of progressive rate structures as a further step to advance the City's goal of reduced water use. Maintaining a water conservation oriented rate structure and evaluating its effectiveness is an ongoing task.

**Table 1. City of Port Lavaca Water Rate Structure**

*Residential:*

1-2,000 gallons	\$15.00
Over 2,000 gallons	\$4.75 per 1,000 gallons

*Small commercial:*

Minimum Charge	Amount for usage of 2,000 gallons
Over 2,000 gallons	\$4.95 per 1,000 gallons
$\frac{5}{8}$ -1 $\frac{1}{2}$ Meter	\$17.50 per month

*Large commercial:*

Water Usage	\$4.95 per each 1,000 gallons
2-6 inch meter	\$35.00 per month

Table 2. City of Port Lavaca Sewer Rate Structures

*Residential wastewater user rates:*

1-2,000 gallons	\$14.00
Over 2,000 gallons	\$4.90 per 1,000 gallons

*Residential wastewater user rate  
for customer outside city limits:*

1½ times rate for customers inside city limits

*Commercial and industrial wastewater  
user rates:*

1-2,000 gallons	\$15.75
Over 2,000 gallons	\$4.95 per 1,000 gallons
Customers outside city limits	1½ times user rate for customers inside city limits

*Extra strength surcharge:*

Over 250 ppm BOD or TSS	\$60.00 per week, per test
Additional tests at customers request	\$70.00 per test
Industrial wastewater discharge over 250 ppm BOD or TSS	Based on formula

The average of all samples taken during the month that exceed 250 ppm shall be used to determine the BOD and TSS used in the following formula:

Surcharge equals	$\frac{\text{Total usage } (\$2.56 \text{ [BOD-250]})}{1,000 \text{ gal.}}$
and/or	$\frac{\text{Total usage } (\$2.34 \text{ [TSS-250]})}{1,000 \text{ gal.}}$

*Low pressure sewer systems (LPSS)*

1. The minimum monthly charge for each residential customer with LPSS within the city limits shall be \$14.00 for the first 2,000 gallons or a fraction thereof plus \$4.90 per thousand gallons of water used in excess of 2,000 gallons.
2. There will be a \$10.00 monthly maintenance fee to all LPSS customers.
3. For residential customers located outside the city limits the rates for discharging normal wastewater into the sanitary sewer system shall be 1½ times the rate for customers inside the city limits.

### 3. Universal Metering and Meter Repair and Replacement

Unaccounted-for water is water that is supplied to the system but not metered. An example of un-metered water is flushing of water distribution mains. Unaccounted for water also involves any losses to the system through faulty meter readings of distribution line leaks. These losses to the system should be calculated and reported on an annual basis. To meet this objective, the following concepts should be included in a water loss audit program:

#### 1. Universal Metering of Customer Uses

It is essential that all customers and water users be metered. In addition to installing new meters on previously unmetered connections, the City can also implement a meter replacement program whereby old and faulty meters are replaced with new ones and connected to an automatic meter reading system. This generally improves the accuracy of the meter system and therefore reduce the potential for unaccounted-for water.

#### 2. Periodic Meter Testing and Repair

A maintenance program of meter testing and repair is essential in gathering accurate data on the water system. To ensure problems are detected on a consistent and methodical basis, all meters owned by the City should be tested according to the following schedule:

- Master Meters- test annually
- Customer Meters (larger than 1 ½")- test every 5 years
- Customers Meters (smaller than 1 ½") – test sample group of Meters of similar age every 10 years

To avoid testing every customer meter in one year, stagger testing should be utilized to ensure that an equal number of meters are tested each year. Monthly meter readings should also be checked versus previous readings to determine if there is a dramatic change in water use. A large variation could indicate that the meter is not operating properly and should be investigated further.

### 4. Leak Detection and Repair Programs

A leak detection, location, and repair program is an important part of reducing water losses in the system. Such a program will tend to finance itself through savings in water purchased by the City.

A monthly accounting of the amount of water purchased from GBRA versus the water metered to the consumers should be maintained and updated on a continual basis. Unaccounted-for water can be monitored by examining these records and reduced as sources are located and eliminated. These sources could include defective hydrants, abandoned services, un-metered water used for fire fighting or other municipal uses, inaccurate meters, illegal hookups, unauthorized use of fire hydrants, and leaks in mains and services.

## 5. Plumbing Codes

According to the TWDB, “the single most effective method of conserving water inside the home is to replace older, inefficient plumbing fixtures with modern, efficient fixtures”. A strong plumbing ordinance is, therefore, essential in meeting water conservation goals. The City of Port Lavaca has adopted the 2009 International Plumbing Code via City ordinance. A copy of this ordinance is located in Appendix E. enforcement of this ordinance is vital to achieving the City’s water conservation goals. Additionally, future plumbing code modifications must include the most current Texas Legislature regulations and additional standards as appropriate.

Table 3. Plumbing Minimum Standards

<b>Fixture</b>	<b>Standard</b>
Shower heads	No more than 2.75 gpm at 80 psi
Lavatory & Sinks Faucets and Aerators	No more than 2.2 gpm at 60 psi
Wall-mounted, Flushometer Toilets	No more than 2.0 gallons per flush
All other Toilets	No more than 1.6 gallons per flush
Urinals	No more than 1.0 gallons per flush
Drinking Water Fountains	Must be self-closing
<b>Additional Requirements</b>	
All Hot Water Lines	Must be insulated
New Swimming Pools	Must have recirculating filtration equipment

## 6. Recycling and Reuse

Recycling or reuse of waters is currently not practiced in Port Lavaca. The effluent from the wastewater treatment plant is available for reuse by an authorized entity. Although it is possible to use the treated effluent for irrigation or cleaning at the WWTP, the City of Port Lavaca does not practice this currently. The City will evaluate and consider possible implementation of a reuse program to help achieve the water conservation goals outlined in this plan.

## 7. Pressure Reduction

Excessive pressures in water distribution systems and customer connections are directly related to the mechanical wear experienced on plumbing fixtures and the quantities of water lost through system leaks. With lower pressures in a system, line and valve breaks occur less frequently and less water is lost when breaks do occur. It is essential that an updated water distribution system model be maintained to examine impacts of new lines to the existing variations in pressures. At such time that pressures exceed 80 psi in certain portions of the City, installation of pressure reducing valves (PRV) will be warranted to reduce the potential for increases in unaccounted-for water through system leaks. Furthermore, the City is currently conducting improvements to help alleviate pressure differentials found within the distribution system.

## 8. Targeted Goals for Municipal Water Use Conservation

In order to advance water conservation efforts, the City has established 5-year and 10-year target goals for reduction in municipal use including a schedule for implementing the Plan to achieve the targeted reductions and a method of tracking its implementation and effectiveness.

The TWDB provided a tool for use in estimating the targeted goals for municipal water use conservation. The Water Conservation Utility Profile (TWDB Form WRD-264) was completed with updated information from the original plan. This form refers to the Certificate of Convenience and Necessity (CCN) and Service Area Map which is included as Exhibit A to this Water Conservation Plan. The City of Port Lavaca had made great strides in accomplishing water use reduction before the statement of the following targeted goals, and the TWDB estimate for water savings have been adjusted to reflect local conditions. The estimated water savings from the previously described long term goals are as follows:



1. Education and information will be provided on a yearly basis to all customers presenting non-wasteful uses of water and techniques that can be employed to conserve water. Based on the TWDB “most likely” scenario, a 2% savings in the average annual per capita use can be realized through education programs and 5% for the “advanced” scenario. The “most likely” scenario equates to 2.26 gallons per capita per day (gpcpd) reduction (5-year average annual gpcpd of 113 multiplied by 2.0%) and the advanced scenario equates to 5.65 gallons per capita per day (gpcpd) reduction (5-year average annual gpcpd of 113 multiplied by 5%).
2. As part of education measures, customers will be encouraged to retrofit old plumbing fixtures with water-conserving units. The TWDB has set a “most-likely” goal of 20.5 gpcpd and an “advanced” goal of 21.7 gpcpd by replacing old plumbing fixtures. The City of Port Lavaca has already realized some savings from the retrofit and new installation of water-conserving plumbing fixtures. Substantial new development in the City utilizes water efficient plumbing fixtures required by the City’s building code. These existing local conditions allow for an estimated savings of 4.5 gpcpd for an “advanced” goal.
3. Education will also help in reduction of summer usage. Seasonal water uses from June to August have represented approximately 30% of the total annual production over the last 5 years. This seasonal peak can be offset with an increasing water charge as the usage rises and increased public awareness of water-conserving activities. The seasonal per capita usage contributes 15.8 gpcpd (5-year average per capita use of 113 multiplied by 14%). With consideration for existing local conditions, the “most likely” conservation scenario can achieve a 3% reduction in this use and the “advanced” can achieve a 10% reduction. The resulting gpcpd seasonal use reduction provides approximately 1.58 gpcpd in water savings (15.8 multiplied by 10%) for the “advanced” scenario.
4. Unaccounted for water from water production to the consumers on the system should be reduced from the previous 5-year average of 16% (average calculated from water losses for 2005 through 2009). This loss should be reduced to no more than 12%. The associated potential savings by reducing unaccounted for water loss is 4.52 gpcpd (113 gpcpd multiplied by difference between 16% and 12%) for the “advanced” scenario and 50% of the potential savings for the “most likely” scenario. This goal will require on-going metering and operational adjustments as well as continual repair of old lines and meters in the distribution system. The result will be a decrease in per capita water consumption thus reducing water demands on the system.

These goals provide a total potential for reducing water usage in the most likely scenario by 2.26 gpcpd. This would reduce the average year annual per capita use from 113 to 110.7 gpcpd. An advanced scenario gives a maximum reduction in water usage of 4.5 gpcpd. This would reduce the average year annual per capita use from 113 to 108.5 gpcpd. The City intends to meet one-half of this goal within 5 years of plan adoption (2015) and the second-half of this goal within 10 years of plan adoption (2020). The following table summarizes the targeted goals.

Table 4. Targeted 5 and 10 Year Goals

	Average Annual Per Capita Use (gpcpd)	Water Savings (gpcpd)
Current	113	0
2015 (5 Year Goal) Most Likely	111.9	1.13
2015 (5 Year Goal) Advanced	110.75	2.25
2020 (10 Year Goal) Most Likely	110.7	2.26
2020 (10 Year Goal) Advanced	108.5	4.5

It is important to note that the 2006 Region L Water Plan adopted by the South Central Texas Regional Water Planning Group and accepted by the TWDB estimated the per Capita use for Port Lavaca in 2020 to be 117 gpcpd.

These stated targeted 5 and 10 year goals do not account for possible future changes in the makeup of the City's water users. For example, additionally heavy water users are expected to be added to the system, including new educational facilities and regional parks currently under construction. Changes to the makeup and usage patterns of the City's water users will affect the per capita water usage, but the water conservation strategies outlined in this Plan will still apply to all the city's water users, and the City will make every effort to accommodate new heavy water users while maintaining its goals for water use reduction.

It is also important that updates to the Region L Water Plan be coordinated with the City so that water use demand and projections accurately reflect the trends in Port Lavaca's water use. The City believes that historical production volumes from years as far back as a decade provide a better representation of the City's historical water use, and this data coupled with current and future water use trends would provide greater accuracy for modeling future water use projections.

## 9. Schedule of Program

In order to maintain a schedule for its program, the city must consider a wide variety of tasks in order to successfully meet the goals of its Plan. The City has made significant progress on many conservation efforts before the adoption of this Plan. Programs to inform the public about water conservation exists, new water conservation oriented rates have been adopted, and most meters have been replaced. However, many of these programs have ongoing steps that that will need to be performed consistently in order to maintain effectiveness. The following is a schedule of tasks for the City's Water Conservation Plan.

1. The City of Port Lavaca should complete a Public Information Plan encompassing all aspects of information and education programs already mentioned within 6 months of adopting the 2010 Water Conservation Plan. In the second year after the Public Information Plan is complete, the City of Port Lavaca should revise the Public Information Plan and conduct a survey of its customers to measure the effectiveness of its plan. For each subsequent year, a revision of the Public Information Plan should be completed. Every other year after the first survey has been completed; the City should survey its customers or determine some method to measure the effectiveness of its information campaign.
2. Once a year, the City of Port Lavaca should review consumption patterns and its income and expense levels and evaluate whether or not the current water rates are effective and appropriate. Adjustments should be made as needed, and consideration should be given to the adoption of a progressive water and sewer rate structure.
3. The City of Port Lavaca should provide information regarding the water rate structure to each of its customers once a year. Also, every five years, or when the billing software is changed, the City of Port Lavaca should provide customers with historical water use for the previous 12 months.
4. Meters will be tested according to Periodic Meter Testing and Repair on page 11 of this plan.
5. A leak detection and repair program will be maintained as mentioned previously. Accounting data of the water purchased from GBRA versus the measured consumption from the City water meters should be maintained on a continual basis. These records can be monitored to determine water loss and unaccounted-for water. In addition, the City should also consider implementing surveys of the water system once a year to find possible leaks in the system.

6. Replacement of old and leaking water lines should be completed as soon as practical when a leak is identified. Even when leaks are not apparent, a schedule for replacement of old water lines should be maintained and updated as needed.
7. The City should consider adopting provisions to require the installation of pressure reducing valves for areas with pressure greater than 80 psi. A water distribution system model should be updated on a periodic basis and can be used to determine information about the City's water system and where pressure problems can be alleviated.

#### 10. Method of Tracking

In order to track the progress, the City should collect information about its programs and conduct surveys of the population to evaluate the effectiveness of the program. For literature pieces, the number of such pieces and topics covered should be documented. The number of news programs or advertisements should be documented and the total population of the service area should be conducted and recorded to evaluate the effectiveness of the program.

1. For information programs, the City should collect information about its programs and conduct surveys of the population to evaluate the effectiveness of the program. For literature pieces, the number of such pieces and topics covered should be documented. The number of news programs or advertisements should be documented and the total population of the service area should be tracked. After this information is collected, surveys should be conducted and recorded to evaluate the effectiveness of the program.
2. The billing structure should be evaluated annually. Several pieces of information are required to evaluate this structure effectively. A copy of the rate ordinance should be documented. Billing and customer records should be kept and water consumption by each customer class at the beginning and end of the reporting period should be recorded.
3. In order to evaluate the meter installation program, guidelines of meter installation based upon customer usage should be written and available, a meter repair and replacement policy should be documented, and meter number, size, make, and model should be recorded for each meter repair and replacement.
4. To track the progress of the City's Leak Detection and Repair Program, the City should maintain a water distribution model, records of water consumption of its customers, and accounting information of

water bought from GBRA. This information will also be helpful in evaluating the City's Pressure Reduction Program.

5. The effectiveness of the City's Water Conservation Plan can be Measured by tracking information similar to that found in the Utility Profile in Attachment C.

The Water Conservation Implementation Report, found in Appendix F, should be completed periodically to gauge the effectiveness of the City's water conservation efforts. Accounting data of water purchased from GBRA and records of water consumption by the City's customers can be performed annually to measure progress toward the 5 and 10 year goals in water usage reduction. If no progress is apparent, the City may want to consider alternative water conservation programs.

## 11. Means of Implementation and Enforcement

The City Manager of Port Lavaca or his/her duly appointed representative will act as the Administrator of the Water Conservation Plan. The Administrator will oversee the execution and implementation of all elements of the plan and be responsible to oversee the keeping of adequate records for program verification.

As a means of implementing and enforcing this plan, all plan elements discussed in this document were adopted by the City Resolution of the City of Port Lavaca (see attached Resolution and Appendix B).

## 12. Periodic Reviews and Evaluations

The TCEQ requires (under 30 TAC 288.30) that the Water Conservation Implementation Report located in Appendix F be completed every 5 years and whenever this Plan is updated or amended.

When under financial obligation to the TWDB, the City is required (under 31 TAC 363.71) to submit an annual report describing the implementation, status, and quantitative effectiveness of the water conservation program. This annual report can be completed in the form of the Water Conservation Report, which is found in Appendix F, and is due within 60 days after the anniversary date of the loan closing for each year the City is under financial obligation to the TWDB. The Administration will undertake the task of completing this annual report.

### 13. Contracts with Other Entities

The adoption of this plan does not affect the water contracts with GBRA or the City's wholesale customers. The City will require, through contractual agreements, that any political subdivision or utility contracting with the City in the future for treated water adopt a water conservation plan acceptable to the TWDB and TCEQ.



Appendix A  
Correspondence, Coordination, and Notification





City Manager  
Ext. 222

December 2, 2010

City Secretary  
Ext. 224

Attention: Herb Wittliff  
Guadalupe Blanco River Authority  
Port Lavaca Operations  
P.O. Box 146  
Port Lavaca, Texas 77979

Code Enforcement  
Ext. 225

Finance  
Ext. 224

Inspections Permits  
Ext. 229

Re: City of Port Lavaca-2010 Water Conservation Plan

Municipal Court  
Ext. 226

The City of Port Lavaca is seeking to adopt the 2010 Water Conservation Plan. This Plan will incorporate the TCEQ requirements set forth by the passage of 2007 House Bill 4.

Personnel  
Ext. 224

Utility Billing  
Ext. 228

As the City's water supplier, a copy of this plan is herewith submitted for your review and to provide you the opportunity for input in the preparation of this document.

Animal Control  
361-552-5726

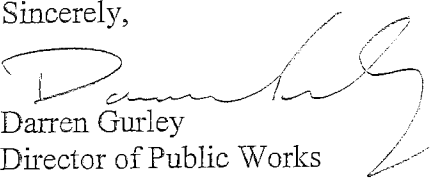
If you have any questions or require additional information please feel free to call me at (361) 552-3347.

Bauer Center  
361-552-1234

Fire Station  
361-552-3240

Sincerely,

Public Works Director  
361-552-3347

  
Darren Gurley  
Director of Public Works

Parks & Recreation  
361-552-1234

Police  
361-552-3788

Streets  
361-552-3347

Utilities Operation  
361-552-3347

City Manager  
Ext. 222

December 2, 2010

City Secretary  
Ext. 224

Attention: Laura Raun  
South Central Texas Regional Water Planning Group  
111 W. 8th Street  
Austin, Texas 78701

Code Enforcement  
Ext. 228

Finance  
Ext. 234

Inspections/Permits  
Ext. 229

Re: City of Port Lavaca-2010 Water Conservation Plan

Municipal Court  
Ext. 226

The City of Port Lavaca is seeking to adopt the 2010 Water Conservation Plan. This Plan will incorporate the TCEQ requirements set forth by the passage of 2007 House Bill 4.

Personnel  
Ext. 224

As the City's water planning group, a copy of this plan is herewith submitted for your review and to provide you the opportunity for input in the preparation of this document.

Utility Billing  
Ext. 238

If you have any questions or require additional information please feel free to call me at (361) 552-3347.

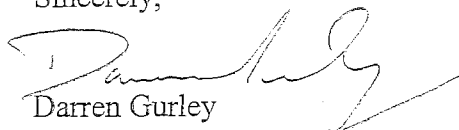
Animal Control  
361-552-5726

Bauer Center  
361-552-1234

Fire Station  
361-552-6241

Sincerely,

Public Works Director  
361-552-3347

  
Darren Gurley  
Director of Public Works

Parks & Recreation  
361-552-1234

Police  
361-552-3788

Streets  
361-552-3347

Utilities Operation  
361-552-3347

Appendix B  
Adoption Resolution



**A RESOLUTION ADOPTING THE 2010 WATER CONSERVATION PLAN FOR THE CITY OF PORT LAVACA TO PROMOTE RESPONSIBLE USE OF WATER CONSUMPTION REDUCTION AS REQUIRED BY 2007 HOUSE BILL 4 OF THE TEXAS STATE LEGISLATURE.**

WHEREAS, the City of Port Lavaca, Texas, recognizes that the amount of water available to its citizens and customers is limited; and

WHEREAS, the City desires to conserve water resources; and

WHEREAS, the City desires to comply with section 11.1271 of the Texas Water Code and applicable rules of the Texas Commission on Environmental Quality which require these plans for all public water supply; and

WHEREAS, pursuant to chapter 54 of the Local Government Code and in the best interests of its citizens, the City is authorized to adopt Resolutions it deems are necessary and expedient to preserve and conserve its water resources;

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF PORT LAVACA, TEXAS THAT:

Section 1. The City Council does hereby find and declare that sufficient and timely written notice of place and subject matter of this meeting adoption this Resolution was posted. The City Council further ratifies, approves and confirms such written notice and posting therefore.

Section 2. The City Council adopts the 2010 Water Conservation Plan attached to this resolution. All resolutions that are in conflict with the provisions of this Resolution are hereby repealed.

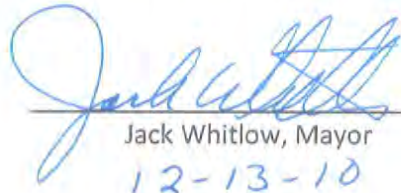
Section 3. Should any paragraph, sentence, clause, phrase or word of this Resolution be declared unconstitutional or invalid for any reason, the remainder of this Resolution shall not be affected.

Section 4. The City Secretary is hereby authorized and directed to publish this Resolution.

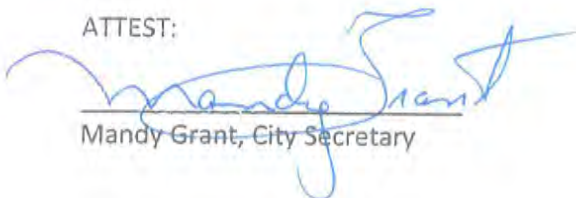
Section 5. The City Manager or Chief Administrative Officer or his designee is hereby directed to file a copy of the plan and this Resolution with the Texas Water Development Board in accordance with Title 31, Chapter 363 of the Texas Administrative Code.

Section 6. This Resolution shall take effect after passage and publication.

Passed and approved by the City Council on this 8th day of November, 2010.

  
Jack Whitlow, Mayor  
12-13-10

ATTEST:

  
Mandy Grant, City Secretary



Appendix C  
Water Conservation Utility Profile  
(TWDB Form WRD-264)







## TEXAS WATER DEVELOPMENT BOARD

## UTILITY PROFILE

The purpose of the Utility Profile is to assist with water conservation plan development and to ensure that important information and data be considered when preparing your water conservation plan and its target and goals. Please complete all questions as completely and objectively as possible. See *Water Conservation Plan Guidance Checklist* (WRD-022) for information on other water conservation plan provisions. You may contact the Municipal Water Conservation Unit of the TWDB at 512-936-2391 for assistance.

<b>APPLICANT DATA</b>
-----------------------

Name of Utility: City of Port Lavaca

Public Water Supply Identification Number (PWS ID): 0290002

Address: 202 N. Virginia St. City: Port Lavaca

State: TX Zip Code: 77979 Email: opena@portlavaca.org

Telephone Number: (361) 552-3347 Fax: (361) 558-1481

Regional Water Planning Group: L

Groundwater Conservation District: \_\_\_\_\_

Form Completed By: Oscar Pena Title: Utility Superintendent

Signature: \_\_\_\_\_ Date: 10/27/2010

Contact information for the person or department responsible for implementing the water conservation program:

Name: Darren Gurley Phone: (361) 552-3347

Email: dgurley@portlavaca.org

<b>UTILITY DATA</b>
---------------------

**A. Population and Service Area Data**

1. Current population of service area: 11,489

2. Current population served by utility: Water: 11,489

Wastewater: 11,489

3. Population served by water utility for the previous five years starting with the most recent year:

Year	Population
2009	11,489
2008	11,465
2007	11,405
2006	11,471
2005	11,509

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

Year	Population
2010	11,489
2020	12,566
2030	13,743
2040	15,031
2050	16,440

5. List source(s)/method(s) for the calculation of current and projected population:

Current Population: U. S. Census Bureau  
 Projected Population: U. S. Census Population Estimates, April 1, 2000 to July 1, 2009.

#### B. Active Connections

1. Current number of active connections by user type. If not a separate classification, check whether multi-family service is counted as Residential ☐ or Commercial ☒

Water User Type*	Metered	Un-metered	Total
Residential Single Family	3,944		3,944
Residential Multi-family			0
Commercial/Institutional	575		575
Industrial			0
Other (please describe):			0

\* See Appendix A #1.

2. List the net number of new connections per year for most recent three years:

Water User Type*	2009	2008	2007
Residential Single Family	11	11	14
Residential Multi-family			
Commercial/Institutional	7	5	5
Industrial			
Other (please describe):			

\* See Appendix A #1.

C. High Volume Customers

List annual water use for the five highest volume retail and wholesale customers.  
Please indicate if treated or raw water delivery.

Customer	Water User Type*	Annual Water Use (in gallons)	Treated	Raw
Memorial Medical	Retail	99,452	<input checked="" type="radio"/>	<input type="radio"/>
HEB	Retail	74,887	<input checked="" type="radio"/>	<input type="radio"/>
Bordeaux Apts.	Retail	68,956	<input checked="" type="radio"/>	<input type="radio"/>
Regency nursing	Retail	60,020	<input checked="" type="radio"/>	<input type="radio"/>
Hillman Shrimp	Retail	49,989	<input checked="" type="radio"/>	<input type="radio"/>

\* See Appendix A #1

D. Water Supply System

- Design daily capacity of system: \_\_\_\_\_ gallons per day
- Storage Capacity: Elevated 1,000,000 gallons per day  
Ground \_\_\_\_\_ gallons per day
- If surface water, do you recycle filter backwash to the head of the plant?  
Yes ☐ No ☐. If yes, approximately \_\_\_\_\_ gallons per day.

E. Water Accounting Data

- Amount of water use in gallons for previous five years.  
Please indicate whether: Treated Water ☒ or Raw Water ☐

YEAR	2009	2008	2007	2006	2005
January	37,325,000	35,222,000	35,136,000	37,402,000	34,028,000
February	32,899,000	33,058,000	31,132,000	33,261,000	31,450,000
March	37,232,000	35,869,000	35,727,000	40,678,000	35,151,000
April	38,506,000	38,321,000	33,465,000	43,733,000	38,049,000
May	44,690,000	42,560,000	37,722,000	48,174,000	39,969,000
June	45,592,000	53,313,000	35,571,000	39,151,000	45,132,000
July	61,886,000	48,336,000	34,957,000	39,783,000	48,988,000
August	56,122,000	42,300,000	38,090,000	41,983,000	47,425,000
September	38,900,000	40,087,000	37,192,000	38,081,000	43,253,000
October	35,949,000	43,616,000	37,175,000	37,385,000	43,238,000
November	33,015,000	39,213,000	37,213,000	34,703,000	39,493,000
December	34,503,000	37,969,000	36,907,000	36,496,000	37,149,000
TOTAL	496,619,000	489,864,000	430,287,000	470,830,000	483,325,000

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

Master meter at entry point of Distribution System.

2. Amount of water sold in gallons as recorded by Water User Type for the previous five years  
(See Appendix A #1)

Year	Residential Single Family	Residential Multi Family	Commercial/ Institutional	Industrial	Other	Wholesale	Total Sold
2009	256,299,000	163,038,000					419,337,000
2008	250,429,000	162,055,000	3,992,000				416,476,000
2007	212,742,000	153,525,000	4,412,000				370,679,000
2006	228,575,000	163,910,000	3,842,000				396,327,000
2005	209,489,000	167,183,000	1,098,000				377,770,000

3. GPCD and Seasonal Water Use for the previous five years

Year	Population	Total Water Use	Total gallons per capita per day (GPCD)*	Residential GPCD**	SEASONAL WATER USE***	
					Winter per capita per day	Summer per capita per day
2009	11,489	496,619,000	118	100	101	158
2008	11,465	489,864,000	117	99	103	140
2007	11,405	430,287,000	103	88	101	106
2006	11,471	470,830,000	112	94	104	117
2005	11,509	483,325,000	115	90	99	137
Five Year Average	11,468	474,185,000	113	94	102	131

\* Total GPCD (See Appendix A #2):

\*\* Residential GPCD (See Appendix A #3):

\*\*\* Seasonal Water Use (See Appendix A #4)

4. Water Loss Data for the previous five years  
(See Appendix A #5)

Year	Water Loss expressed in gallons	Water Loss expressed in GPCD	Water Loss expressed as a percentage
2009	77,342,000	18	15.57%
2008	73,388,000	18	14.98%
2007	59,608,000	14	13.85%
2006	74,503,000	18	15.82%
2005	105,555,000	25	21.84%
Five Year Average	78,079,200	19	16.41%

5. Peak Day Use (in gallons) to Average Daily Use (in gallons) Ratio for the previous five years  
(See Appendix A #6)

Year	Average Daily Use	Peak Day Use	Ratio
2009	1,360,600	2,202,000	1.62
2008	1,342,093	2,010,000	1.50
2007	1,178,868	1,643,000	1.39
2006	1,289,945	2,024,000	1.57
2005	1,324,178	2,138,000	1.61

F. Projected Demands

Estimate water supply requirements for at least the next ten years using population trends, historical water use, and economic growth, etc.

Year	Population	Water Demand (in gallons)
2011	11,597	487,491,492
2012	11,705	492,031,380
2013	11,813	496,571,268
2014	11,921	501,111,156
2015	12,029	505,651,044
2016	12,137	510,190,932
2017	12,245	514,730,820
2018	12,353	519,270,708
2019	12,461	523,810,596
2020	12,569	528,350,484

Indicate sources of data and how projected water demands were determined. Attach additional sheets if necessary.

Population: TWDB, 2006 Regional Water Plan, City Water Demand Projections 2000-2060  
Water Demand: 5 year average of total gallons per capita per day (current usage)

G. Wastewater System Data

1. Design capacity of wastewater treatment plant(s): 2,000,000 gallons per day
2. Is treated effluent used for:

Use	Total Annual Volume (in gallons)
On-site irrigation	
Plant wash down	
Chlorination/de-chlorination	
Industrial	
Landscape irrigation (parks, golf courses)	
Agricultural	
Other (please describe):	

Could treated effluent be substituted for certain potable water now being used? Yes ☒ No ☐

H. Wastewater Data for Service Area

1. Percent of water service area served by wastewater system: 95 %
2. Monthly wastewater volume in gallons, treated for previous five years.

YEAR	2009	2008	2007	2006	2005
January	30,230,000	28,530,000	28,460,000	30,300,000	27,560,000
February	26,650,000	26,780,000	25,220,000	26,940,000	25,470,000
March	30,160,000	29,050,000	28,940,000	32,950,000	28,470,000
April	31,190,000	31,040,000	27,110,000	35,420,000	30,820,000
May	36,200,000	34,470,000	30,550,000	39,020,000	32,370,000
June	36,930,000	43,180,000	28,810,000	31,710,000	36,560,000
July	50,130,000	39,150,000	28,320,000	32,220,000	39,680,000
August	45,460,000	34,260,000	30,850,000	34,010,000	38,410,000
September	31,510,000	32,470,000	30,130,000	30,850,000	35,030,000
October	29,120,000	35,330,000	30,110,000	30,280,000	35,020,000
November	26,740,000	31,760,000	30,140,000	28,110,000	31,990,000
December	27,950,000	30,750,000	29,890,000	29,560,000	30,090,000
<b>TOTAL</b>	402,270,000	396,770,000	348,530,000	381,370,000	391,470,000

Submit Form by Email

Print Form

Reset Form

## Appendix A

### Definitions of Utility Profile Terms

1. Residential – Single Family should include water sold to single family and duplexes. Residential – Multi-Family should include water sold to this class of customers only. Commercial/Institutional sales should include water sold to retail businesses, offices, hospitals, etc. Industrial sales should include water sold to manufacturing and other heavy industry. Wholesale sales should include water sold to another utility for resale to the public. Other water sales should be noted as necessary.
2. Total use in gallons per capita per day is defined as total average daily amount of water treated or raw water provided for potable use by a public water supply system. The calculation is made by dividing the water diverted or pumped for treatment by population served. Indirect reuse volumes shall be credited against total diversion volumes for the purpose of calculation gallons per capita per day for targets and goals developed for the water conservation plan. Total water use is calculated by subtracting the wholesale sales from the total treated or raw water.
3. Residential use in gallons per capita per day is calculated by dividing the total single family plus multi-family residential water sales by the population served and then dividing by 365.
4. Seasonal water use is the difference between winter daily per capita use and summer daily per capita use. To calculate the winter daily per capita use, add the monthly diversions for December, January, and February, and divide by 90. Then divide this figure by the population. To calculate the summer daily per capita use, use the months of June, July, and August.
5. Water Loss is the difference between water a utility purchases or produces and the amount of water that it can account for in sales and other use, metered and unmetered, such as firefighting, line flushing, and water for public buildings and water treatment plants. Water loss can result from:
  1. Inaccurate or incomplete record keeping;
  2. Meter error;
  3. Leaks; and
  4. Water theft and unauthorized use.
6. The peak-day to average-day ratio is calculated by dividing the maximum daily pumpage by the average daily pumpage. Average daily pumpage is the total pumpage for the year divided by 365.





Appendix D  
Water and Sewer Rates  
(Excerpt from City Fee Schedule Ordinance)



# PORT LAVACA CODE

<i>Section Number</i>	<i>Subject</i>	<i>Fee Amount</i>
	Marching band units, pedestrians, floats and animals	\$25.00
(Ord. No. G-2-75, § 7, 2-24-1975)		

## CHAPTER 50—UTILITIES

### *Water service deposits*

	<i>Type of Deposit:</i>	
50-49(a)	Residential	\$90.00-\$190.00
50-49(b)	Commercial	Up to 60-day average bill
50-50(2)	Fire hydrant	\$1,500.00
50-64	Contractor's deposit	\$50.00

### *Water tap and meter installation fees.*

50-52(a), 42-105	<i>Water tap / meter set fees:</i>	
	¾-inch water tap	\$700.00
	¾-inch meter set fee	\$175.00
	1-inch water tap	\$800.00
	1-inch meter set fee	\$240.00
	2-inch or greater tap	Based on current materials and labor
50-52(b)	Inspection fee	TBD
50-52(c)	Capital recovery fee	TBD

### *Water table*

50-67	<i>Water user rates:</i>	
50-67	<i>Residential:</i>	
	1—2,000 gallons	\$15.00
	Over 2,000 gallons	\$4.75 per 1,000 gallons
50-67	<i>Small commercial:</i>	

# APPENDIX A—FEES, RATES AND CHARGES

<i>Section Number</i>	<i>Subject</i>	<i>Fee Amount</i>
	Minimum charge	Amount for usage of 2,000 gallons
	Over 2,000 gallons	\$4.95 per 1,000 gallons
	5/8—1½-inch meter	\$17.50 per month
50-67	<i>Large commercial:</i> Water usage	\$4.95 per each 1,000 gallons
	2—6-inch water meter	\$35.00 per month
<i>Sewer table</i>		
50-111(a)(1), 42-105	<i>Sewer tap fees:</i> 4-inch sewer tap 6-inch sewer tap 8-inch or greater	\$600.00 \$700.00 Based on current materials and labor
	Pavement break will be charged at \$20.00 per linear foot Street bore will be charged based on current contractor fees	
50-111(b)	Inspection fee	\$25.00 per tap
50-111(c)	Capital recovery fee	\$25.00
50-120(a)	Annual industrial wastewater permit	\$2.00
50-122	<i>Residential wastewater user rates:</i> 1—2,000 gallons Over 2,000 gallons	\$14.00 \$4.90 per 1,000 gallons
50-122	<i>Residential wastewater user rate for customer outside city limits:</i>	1½ times rate for customers inside city limits
50-123	<i>Commercial and industrial wastewater user rates:</i> 1—2,000 gallons	\$15.75

# PORT LAVACA CODE

<i>Section Number</i>	<i>Subject</i>	<i>Fee Amount</i>
	Over 2,000 gallons	\$4.95 per 1,000 gallons
	Customers outside city limits	1½ times user rate for customers inside city limits
50-124	<i>Extra strength surcharge:</i>	
	Over 250 ppm BOD or TSS	\$60.00 per week, per test
	Additional tests at customer request	\$70.00 per test
	Industrial wastewater discharge over 250 ppm BOD or TSS	Based on formula

*Note—Average usage rate:* Wastewater user rates shall be computed by averaging the water usage of the customer for the months of December, January and February. The average usage rate computed during these months shall apply notwithstanding any change in residence. During March of each year, the wastewater user rates shall be recomputed for each residential customer.

*Note—New residences:* New residences or residences which have no water usage history, shall be charged based upon actual usage at a rate of \$14.00 for the first 2,000 gallons and \$4.90 per thousand in excess of 2,000 gallons until an average can be computed based upon the formula in subsection (a) of this section.

*Note—Variations:* The director of finance or his designee is authorized to establish a wastewater user rate for a newly constructed residence or a residence with a change in occupancy or to make necessary adjustments in the event of a water leak upon request by the customer.

*Note—*The director of finance or his designee is also authorized to modify an individual's rate if application of the winter average would result in an unusual burden on the customer because their usage is relatively constant. At the request of the customer, they may be placed on a volume rate of \$4.90 per 1,000 gallons in excess of 2,000 gallons, based upon actual volumes each month.

*Note—*Mobile home parks and apartment complexes shall be considered commercial.

*Note—*For residential customers located outside the city limits the rates for discharging normal wastewater into the sanitary sewer system shall be 1½ times the rate for customers inside the city limits.

*Note—*The average of all samples taken during the month that exceed 250 ppm shall be used to determine the BOD and TSS used in the following formula:

Surcharge equals

$$\frac{\text{Total usage } (\$2.56 \text{ [BOD-250]})}{1,000 \text{ gal.}}$$

and/or

$$\frac{(\$2.34 \text{ [TSS-250]})}{1,000 \text{ gal.}}$$

*Note—Low pressure sewer system (LPSS).*

(1) The minimum monthly charge for each residential customer with LPSS within the city limits shall be \$14.00 for the first 2,000 gallons or fraction thereof plus \$4.90 per thousand gallons of water used in excess of 2,000 gallons.

## APPENDIX A—FEES, RATES AND CHARGES

(2) There will be a \$10.00 monthly maintenance fee to all LPSS customers.

(3) For residential customers located outside the city limits the rates for discharging normal wastewater into the sanitary sewer system shall be 1½ times the rate for customers inside the city limits.

<i>Section Number</i>	<i>Subject</i>	<i>Fee Amount</i>
-----------------------	----------------	-------------------

*LPSS tap. E-one LPSS: \$6,000.00.*

*Utility billing fees.*

	<i>Type of Fee:</i>	
50-41(b), 50-49(4)	Tampering	\$100.00
50-42	Meter inaccessible	\$30.00
50-45	Meter testing	\$50.00
50-49(3)	Nonsufficient funds	\$30.00
50-51	Trip charge	\$30.00
50-57, 50-59(b)	Disconnection	\$30.00
50-59(a)(2)	After-hours reconnection	\$40.00
50-61	Transfer service	\$30.00
50-65	Temporary service	\$45.00
50-67	Missed turn on	\$30.00
50-67	Rereads-customer	\$30.00
(Ord. No. G-3-85, § 6, 7-8-1985; Ord. No. G-4-85, §§ 15, 17, 18, 7-8-1985; Ord. No. G-2-08, §§ I(18, 19), 9-8-2008; Ord. No. G-4-08, § 29, 9-22-2008)		

## CHAPTER 52—VEHICLES FOR HIRE

*Taxicab businesses*

52-40(a)	Business permit	2% of gross receipts, with certificate of convenience and necessity payment attached to application
52-40(b)	Certificate of public convenience and necessity	\$25.00

(Ord. No. G-2-74, § 5, 2-11-1974)

Appendix E  
Plumbing Ordinance





## ARTICLE I. IN GENERAL

Secs. 12-1—12-18. Reserved.

## ARTICLE II. BUILDING TRADE CODES

Sec. 12-19. Purpose.

The purpose of this article is the practical safeguarding of persons and property. The requirements of this article and of the codes adopted in this article are to be considered the minimum requirements for all types of construction and maintenance in the city and outside the city where property is or may be connected to the city water and sewer system. The chief building official is assigned the responsibility for the licensing, permitting, interpretation and enforcement required by the codes.

(Ord. No. G-7-06, § 1, 9-11-2006)

Sec. 12-20. Building trade codes—Adopted.

In order to establish uniform rules, regulations and provisions for the placement, construction, enlargement, alteration, repair, moving, removal, conversion, demolition, occupancy, equipment, use, height, area and maintenance of buildings, signs and structures, there is hereby adopted by the city the following building trade codes:

- (1) The International Building Code 2009 edition, including appendix B (board of appeals), appendix C (group U-agricultural buildings), appendix E (supplementary accessibility requirements for qualified historic buildings and facilities), appendix F (rodent proofing), appendix H (signs), and appendix I (patio covers);
- (2) The International Property Maintenance Code, 2009 edition;
- (3) The International Residential Code, 2009 edition, including appendix G (swimming pools, spas and hot tubs), appendix J (existing buildings and structures), and appendix K (sound transmission);
- (4) The International Plumbing Code, 2009 edition, including appendix E (sizing of water piping system), appendix F (structural safety), and appendix G (vacuum drainage system);
- (5) The International Gas Code, 2009 edition;
- (6) The International Mechanical Code, 2009 edition, including appendix A (combustion air openings and chimney connector pass-throughs);
- (7) The International Energy Conservation Code, 2009 edition, including the appendix;
- (8) The International Electrical Code Administrative Provisions, 2009 edition;
- (9) The National Electrical Code, 2008 edition; and



Appendix F  
Water Conservation Implementation Report  
(TCEQ-20159)





## Texas Water Development Board Water Conservation Program Annual Report

Texas Water Code requires that each entity that is required to submit a water conservation plan to the Texas Water Development Board (TWDB) or the Texas Commission on Environmental Quality (TCEQ) shall file an annual report to the TWDB on the entity's progress in implementing each of the minimum requirements in their water conservation plan. This requirement applies to those entities receiving financial assistance of \$500,000 or more from the TWDB; entities with 3,300 connections or more; and those entities that have a water right through TCEQ. The first report is due by May 1, 2010. Entities receiving financial assistance from the TWDB are to maintain an approved water conservation plan in effect until all financial obligations to the state have been discharged and file a report with the TWDB on the progress in implementing each of the minimum requirements in its water conservation plan and the status of any of its customers' water conservation plans required by contract, within one year after closing on the financial assistance and annually thereafter until all financial obligations to the state have been discharged. Implementation reports prepared for the TCEQ providing the required information may be submitted to the TWDB to fulfill this reporting requirement.

The following questions are designed to provide the TWDB this information in a concise and consistent format. Please fill in the blanks that pertain to your program as completely and objectively as possible. Your water conservation plan should contain long-term elements such as ongoing public education activities, universal metering, water accounting and estimated water savings from water reuse and recycling activities, leak detection and repair and other conservation activities. As you complete the report form, please review your utility's water conservation plan to see if you are making progress toward meeting your stated goal(s).

For additional information please check out our website at

<http://www.twdb.state.tx.us/assistance/conservation/Municipal/Plans/CPlans.asp>

Return completed form to:

Executive Administrator  
Texas Water Development Board  
P.O. Box 13231  
Austin, Texas 78711-3231  
ATTN: MUNICIPAL CONSERVATION

UTILITY DATA

Name of Utility: City of Port Lavaca

Public Water Supply Identification Number (PWS ID), WR No. : 0290002

Address: 202 N. Virginia St. City: Port Lavaca

State: TX Zip Code: 77979 Email: opena@portlavaca.org

Telephone Number: (361) 552-3347 Fax: (361) 552-1481

Regional Water Planning Group: \_\_\_\_\_

Groundwater Conservation District: \_\_\_\_\_

Form Completed By: Oscar Pena Title: Utility Superintendent

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Reporting Period: \_\_\_\_\_ to \_\_\_\_\_

Total Gallons of Water (Treated or Raw)	Population of Service Area	Total Gallons per Capita per Day (GPCD)*	Residential GPCD**	Total Number of Connections	Water Loss in Gallons per Capita per Day (GPCD)***

\* **Total GPCD:** form calculation is made by dividing the total water treated or raw by the population served and then dividing by 365

\*\* **Residential GPCD:** user calculation is made by dividing the total single family plus multi-family residential water sales by the population served and then dividing by 365

\*\*\* **Water Loss GPCD:** form calculation is made by dividing the amount you provided in number 7G. on page 4 by the population served and then dividing by 365

Please provide the specific and quantified five and ten-year targets as listed in your water conservation plan:

	Total GPCD Target	Water Loss Target	Date to Achieve Target
Five-year target			
Ten-year target			

LONG TERM WATER CONSERVATION PROGRAM

1. Approximately how much did the utility save during the reporting period due to the overall conservation program?

Gallons of Water Saved	Dollar Value of Water Savings*

\* Based on water savings and the cost of treatment or purchase of your water, and any deferred capital costs due to conservation

2. In your opinion, how you would rank the effectiveness of your utility's conservation program?

Effective

☐

Somewhat  
Effective

☐

Less than  
Effective

☐

Not Effective

☐

Do Not Know

☐

Please provide additional information about any successes or problems you may have experienced in implementing your plan.

### 3. Education and Information Program

Please check the appropriate boxes regarding any educational and information activities your utility has provided during the reporting period:

	Implemented	Frequency
Brochures Distributed	<input type="checkbox"/>	
Messages Provided on Utility Bills	<input checked="" type="checkbox"/>	
Press Releases	<input type="checkbox"/>	
TV Public Service Announcements	<input type="checkbox"/>	
Radio Public Service Announcements	<input type="checkbox"/>	
School Program	<input type="checkbox"/>	
Displays and Presentations	<input type="checkbox"/>	
Plant Tours	<input type="checkbox"/>	
Other, please describe:		

### 4. Water Conservation Retrofit and Plumbing Rebate Programs

Please check the appropriate boxes regarding any plumbing fixture programs your utility has provided during the reporting period:

	Give-away	Rebate	Retrofit
Toilets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Showerheads	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Faucet Aerators	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please describe:			



### 5. Rate Structure

Have your rates or rate structure changed since your last report? Yes ☒ No ☐  
If yes, please describe the changes, or attach a copy of the new rate structure.

--

### 6. Universal Metering and Meter Repair

During the reporting period what was the system-wide number of:

	Total Number	Total Tested	Total Repaired	Total Replaced
Production Meters	1		0	0
Meters larger than 1 1/2"				
Meters 1 1/2 or smaller				

Does your system have automated meter reading? Yes ☒ No ☐

### 7. Water Loss and Leak Detection

Please provide the following data regarding water loss in your utility during the reporting period:

	Total Gallons During the Reporting Period
A. PRODUCTION - Water treated or raw	
B. Water sold	
C. Water used for line flushing	
D. Water used for fire department use	
E. Water used for flushing and storage tank cleaning	
F. Water used for any un-metered use (facility use, etc.)	
G. WATER LOSS* = A minus B,C,D,E,F	0

\* WATER LOSS includes un-accounted-for water, water lost from main line breaks and customer service line breaks, and storage over-flow.

How many leaks were repaired in the system or at service connections during the reporting period? \_\_\_\_\_

Please check the appropriate boxes regarding the main cause of water loss in your utility during the reporting period:

Leaks	<input checked="" type="checkbox"/>
Un-metered utility or city uses	<input type="checkbox"/>
Master meter problems	<input type="checkbox"/>
Customer meter problems	<input type="checkbox"/>
Record and data problems	<input type="checkbox"/>
Other, please describe:	

Would you like to receive free technical assistance or equipment from the TWDB regarding leak detection and water loss? Yes ☐ No ☐

#### 8. Water Conservation Programs

Please check the appropriate boxes regarding what conservation programs your utility provided during the reporting period:

Landscape Program	<input type="checkbox"/>
Educational and Information Program	<input type="checkbox"/>
School Education Program	<input type="checkbox"/>
Rainwater Harvesting	<input type="checkbox"/>
Leak Detection	<input type="checkbox"/>
Water Loss	<input type="checkbox"/>
Reuse	<input type="checkbox"/>
Treated Effluent	<input type="checkbox"/>
Other, please describe:	

9. How often does your utility staff review your water conservation program?

\_\_\_\_\_

10. What year did your utility adopt, or revise, their water conservation plan? \_\_\_\_\_

11. What might your utility do to improve the effectiveness of your water conservation program?

12. What might the TWDB do to assist you in improving the effectiveness of your water conservation program?

13. If known, how much expense has your utility incurred in implementing your water conservation program during the reporting period (*literature, materials, staff time, etc.*)?  
\_\_\_\_\_ (dollars/year)

14. Recycling and Reuse of Water or Wastewater Effluent

Please provide the following data regarding what types of water recycling or reuse activities were practiced by your utility during the reporting period, and what volume:

Use	Total Annual Volume (in gallons)
On-site irrigation	
Plant wash down	
Chlorination/de-chlorination	
Industrial	
Landscape irrigation (parks, golf courses)	
Agricultural	
Other, please describe:	
<b>Total</b>	0

Could treated effluent be substituted for certain potable water now being used? Yes ☒ No ☐

15. Drought Contingency and Emergency Water Demand Management

During the reporting period, did your utility activate its Drought Contingency Plan?

Yes ☐ No ☒

If yes, please check all the appropriate boxes for the reason why:

Reason	
Water Shortage	<input type="checkbox"/>
High Demand	<input type="checkbox"/>
Capacity Issues	<input type="checkbox"/>
Equipment Failure	<input type="checkbox"/>
Other, please describe:	

Start Date \_\_\_\_\_

End Date \_\_\_\_\_

[Submit Form by Email](#)

[Print Form](#)

[Reset Form](#)

Exhibit A  
Certificate OF Convenience and Necessity  
And  
Service Area Map



WRS-29  
GENERAL HIGHWAY MAP  
CALHOUN COUNTY  
TEXAS

PREPARED BY THE  
STATE DEPARTMENT OF HIGHWAYS  
AND PUBLIC TRANSPORTATION  
TRANSPORTATION PLANNING DIVISION  
IN COOPERATION WITH THE  
U.S. DEPARTMENT OF TRANSPORTATION

STATE OF TEXAS  
COUNTY OF TRAVIS  
I HEREBY CERTIFY THIS TO BE A TRUE AND CORRECT COPY OF  
A TEXAS COMMISSION ON HIGHWAYS AND TRANSPORTATION

DEC 29 1986

COUNTY CLERK  
MISSION

Report  
COUNTY CLERK  
COUNTY OF TRAVIS  
TEXAS



**CITY OF SEADRIFT**  
**DROUGHT CONTINGENCY PLAN**  
**FOR THE**  
**WATER AND WASTEWATER SYSTEM**

*Currently under  
review and revision  
11/3/2012  
Elm. H.*

**INTRODUCTION**

Drought or a number of other uncontrollable circumstances can disrupt the normal availability of the City's water supply. Even though the City has an adequate water supply, the supply could become contaminated, or a disaster could destroy the supply. During drought periods, consumer demand is often significantly higher than normal. The Water system may not have the capacity to meet higher than average demands without system failure or other unwanted consequences.

It is important to distinguish drought contingency planning from water conservation planning. While water conservation involves implementing permanent water use efficiency or reuse practices, drought contingency plans establish temporary methods or techniques designed to be used only as long as the emergency exist.

**A. PLAN ELEMENTS**

The City of Seadrift, in an effort to meet emergency conditions affecting the City's ability to produce an adequate supply of water, has established the following conditions which will trigger certain emergency procedures regarding the use of water by the residents of Seadrift.

1. Based upon certain weather conditions or at such time when water usage reaches 90 % of the City's plant capacity, the following measures will be implemented:
  - a. The public will be given notice of mild drought conditions affecting the water supply system. Notice will be posted at



locations accessible to the public and the news media will be informed of the notice.

- b. Recommendations to all water users for ways to conserve water will be included in the notice.
- c. The public will be kept advised of existing conditions.

2. During periods of acute water shortage, the following measures will be taken to implement the Emergency Water Rationing Program.

a. Declaring an Emergency

When the system demand exceeds supply or storage capacity measured over a twenty-four hour (24) period, and refilling the storage facilities is rendered impossible, the City may declare an emergency to exist, and thereafter ration water in the following manner.

b. Notice Requirement

Written notice of the proposed rationing shall be mailed or delivered to each paying customer seventy-two (72) hours before the City actually starts the program, and notice shall also be placed in a local newspaper. The customer notice shall contain the following information:

- (1) The date the rationing shall begin.
- (2) The anticipated date rationing shall end.
- (3) The stage (Level) of rationing to be imposed.
- (4) A copy of the notice shall be made available at City Hall for residents who desire a copy.

3. Implementing the rationing of water usage, the following Stage Levels are established.

- a. STAGE 1 (Mild Rationing Conditions) - Alternate day usage of water for outdoor purposes such as lawns, gardens, car



washing, etc.. The provisions for alternate day use shall be specified by the City in the written notice.

b. **STAGE 1-A (Limited Water Usage)** - The City may limit water usage to a gallonage determined by the water system's supply capability to provide continuous service prorated over all customers to be served by the water plant. Water restrictors may be installed for customers that exceed the limited gallonage determined by the system's mechanical capability. A flow restrictor shall be installed at the customer's expense ( not to exceed actual installed cost). Tampering with the flow restrictor will result in water service termination for seven (7) days. The normal Service Tap Fee of the City shall apply for restoration of service. The maximum number of gallons per meter per month shall be contained in the notice to each customer.

c **STAGE 11 (Moderate Rationing Conditions)** - All outdoor water usage is prohibited; however, usage for livestock is exempt.

d **STAGE 111 (Severe Rationing Conditions)** - All outdoor water usage is prohibited: livestock may be exempted by the City. All consumption shall be limited to each customer in one of the following ways:

(1) A fixed percentage of each customer's average use in the prior month, the percentage to be uniformly applied on a system wide basis, each customer being notified of the percentage amount,

OR

(2) A maximum number of gallons per meter per week, with notice to each customer notifying them of this number.

#### **4. VIOLATIONS OF EMERGENCY RATIONING RULES**

Violating the Emergency Rationing Rules established by the City of Seadrift, will be dealt with in the following manner.

a. **FIRST VIOLATION** - The City may install a flow restrictor in the line to limit the amount of water which will pass through the meter in a twenty-four (24) hour period. The cost to be charged to the customer shall be the actual installed cost to the City.

b. **SUBSEQUENT VIOLATIONS** - the City may terminate service at the meter for a period of seven (7) days. The normal Service tap Fee of the City shall be charged for restoration of service.

#### **5. EXEMPTIONS OR VARIANCES FROM RATIONING RULES**

The City may grant any customer an exemption or variance from the uniform rationing program, for good cause. The City shall treat all customers equally concerning exemptions and variances, and shall not employ discrimination in such actions.

#### **6. RATES**


All existing rate schedules shall remain in effect during the rationing period, and no charges may be levied against a customer other than the charges outlined above in this plan.

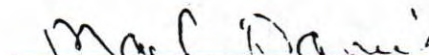


The purpose of this Emergency Rationing Program is to conserve the total amount of water demanded from the city until the supply can be restored to normal levels. The rationing program shall not exceed sixty (60) days without an extension by the City Council.

PASSED AND ADOPTED THIS 6TH DAY OF JANUARY, 1998.

ATTEST:

  
Paula Moncrief  
City Secretary

  
Mark Daniel, Mayor





# Lavaca-Navidad River Authority

P.O. Box 429 Edna, Texas 77957

December 1, 2011

Mr. Randy Smith  
Formosa Plastics  
P. O. Box 700  
Point Comfort, Texas 77978

The Honorable Pam Lambden  
Mayor, City of Point Comfort  
P. O. Box 497  
Point Comfort, Texas 77978

Mr. Robert Coen  
Site Manager  
Inteplast Group Ltd.  
P. O. Box 405  
Lolita, Texas 77971

Gustavo Gonzales P. E.  
Director of Water Operations  
City of Corpus Christi  
P. O. Box 9277  
Corpus Christi, Texas 78469

Re: Current Water Supply Condition  
Drought Contingency Implementation

Dear Water Supply Customer:

I am sending this letter to notify you that implementation of drought contingency measures in addition to the 10% percent pro-rata delivery restriction, which I provided notice of to each water customer by letter dated September 15, 2011, is imminent. Based on the latest weather forecast, inflow and usage data, it is Lavaca Navidad River Authority's (LNRA) prediction that by the end of December, 2011, Lake Texana will have fallen to elevation 30.73 feet mean sea level (msl) or will have reached 40% percent capacity. In accordance with LNRA's Drought Contingency Plan (DCP), a pro-rata water reduction of 20% should be achieved when Lake Texana is at 40% storage capacity. After capacity falls to 40%, LNRA will provide each water customer notice of the date to begin the 20% reduction.

Consistent with Section 8.0 of the DCP, in an effort to sustain the remaining volume in Lake Texana and prolong the availability of this fresh water supply, in the event that an established criteria is triggered, LNRA, in coordination with the TCEQ South Texas Water Master and our water customers, will allocate water supplies on a pro-rata basis in accordance with Texas Water Code § 11.039. The reduction-in-use figure shown in the DCP and as noted herein will be applied to all customers and will continue to adjust according to the change in the capacity of Lake Texana.

To ensure each customer understands what is to be anticipated, based on a review of the 12-month flow data ending August 31, 2011, the table below shows the twelve-month average daily delivered water arranged by water customer, and the corresponding reduced daily volume to be achieved by implementing a 20% pro-rata reduction.

Customer	Avg Daily Rate and Volume		Reduced Daily Volume (20 %)
City of Corpus Christi	30,906 gpm	134.57 ac-ft	107.65 ac-ft
Formosa Plastics	13,875 gpm	62.40 ac-ft	49.92 ac-ft
Inteplast	297 gpm	1.31 ac-ft	1.05 ac-ft
City of Point Comfort	127 gpm	0.56 ac-ft	0.44 ac-ft

Considering the drought may persist and force further restrictions, upon attainment of 30% percent capacity or elevation 27.45 feet msl all diversions would be reduced by 35%; at 20% percent capacity or elevation 23.56 feet msl all diversions would be reduced by 50%. Please advise me as to the impact that this new reduction, and aforementioned future reductions, may have on your operation.

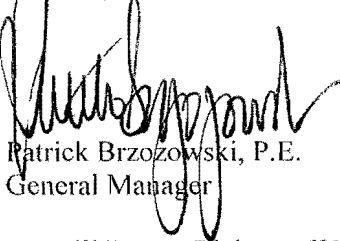
Regarding municipal and industrial diversions, LNRA is in the process of identifying what additional operational measures may need to be taken in the event our existing delivery systems become compromised should the conditions continue to worsen and water levels in the intake pump stations are reduced to a level below our pumping equipments capabilities. Once this information is ascertained, I will advise our customers.

In accordance with TCEQ guidelines on water conservation and drought contingency, the public within your jurisdiction should be notified of the widespread conditions and advised of the appropriate conservation measures that should be implemented. As we have discussed, if LNRA can be of assistance in implementing your individual contingency plans, please advise me.

Saying this, over the past years, LNRA has investigated new and additional water supplies for use in the area. In addition to our evaluation of other longer-term surface water supply strategies, LNRA has listed desalination as an alternative management strategy in LNRA's Management Plan and will be holding a workshop for our Board of Directors (BOD) that is focused on the desalination process. The BOD workshop will be held 6:00 p.m. December 13<sup>th</sup> at LNRA's office off FM 3131 near Edna. The workshop is an open meeting. If your group has an interest in desalination, please attend.

If you have any questions, or need additional information, please call me.

Sincerely,



Patrick Brzozowski, P.E.  
General Manager

cc: Bill Dugat, Bickerstaff Heath Delgado Acosta LLP  
Bob Wallace, Formosa Plastics  
Jack Wu, Formosa Plastics  
Danny Su, Formosa Plastics  
Chris Cavazos, City of Point Comfort  
LNRA Board of Directors