

EXHIBIT A

**WATER CONSERVATION
and
DROUGHT CONTINGENCY PLAN**

For

**GALVESTON COUNTY
WATER CONTROL & IMPROVEMENT DISTRICT No. 1
DICKINSON, TEXAS**



December, 2009

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INTRODUCTION

In response to recent problems with drought across the State, the 75th legislature has passed Senate Bill 1 (SB 1). This legislation requires Regional Water Planning Groups to develop water plans to be incorporated into a State Water Plan. The goal is to "... provide for the orderly development, management, and conservation of water resources and preparation for and response to drought conditions, in order that sufficient water will be available at a reasonable cost to ensure public health, safety, and welfare: further economic development: and protect the agricultural and natural resources of the entire state." As part of the Regional and State Water Plans, all communities are required to develop Water Conservation and Drought Contingency Plans. This coordinated effort by all communities across Texas will ensure success in achieving the goals set by SB1.

Galveston County Water Control & Improvement District No. 1 (GCWCID#1) "The District" previously prepared a Water Conservation and Drought Contingency Plan. At that time The District was impacted by House Bill 2 through its obligation to switch to surface water. The switch to surface water was a requirement of the Harris - Galveston Subsidence District. By following through with this requirement The District acquired its surface water from the Gulf Coast Water Authority (GCWA) through a water supply contract. This contract contained provisions for development of a Water Conservation Plan to be submitted to the GCWA at the time The District purchased water. The Subsidence District mandated that The District use only 10% of its potable water from deep wells and to purchase the remaining 90% from a surface water source.

GCWCID#1 has prepared this updated Water Conservation and Drought Contingency Plan documenting the data collected over the last five years.

The District's water production and distribution and wastewater collection systems are owned by The District. Wastewater is collected and treated by The District. Under policy direction of the District Board of Directors (The Board), the General Manager has the managing control and operation of The District's water and wastewater facilities. The Board must approve final budgets and rates.

The District boundary takes in the entire City of Dickinson as well as areas outside the City limits that have been annexed into The District. The system serves an area of approximately 10.5 square miles. All residential and commercial sites use the District's water and wastewater systems. The previous Plan prepared in 2002 recorded an annual average water consumption

of 770 million gallons which with a reported approximate population of 19000 equated to a user consumption of approximately 110 gallons per capita per day (gpcpd) which was considerably below the then state average of 170 gpcpd. However, the estimated population in July 2002 according to the Texas State Data Center & Office of State Demographics was only 18,086 making the average consumption approximately 117 gpcpd, still considerably lower than the state average. The goal of the previous plan was to reduce consumption by 5% in 5 years. In 2007 the per capita usage excluding the wholesale water sold to League City was 83 gallons per day, showing a 30% reduction and the per capita usage in 2008 was 87 gallons per day.

Through conservation and to protect The District from the adverse effects of drought, it is the goal of The District to enact a Water Conservation and Drought Contingency Plan to maintain an average water consumption use of 85 gallons per capita per day for the five years beginning in the year 2009 and an average water consumption use of 83 gallons per capita per day for the ten years beginning in the year 2009. The 2002 Plan reported a water loss (unaccounted water) of 18%. Data indicates a negative water loss starting in 2007 which considering the drop in water delivery from the GCWA between 2006 and 2007 indicates that the GCWA may have a metering issue at their plant. The District has set a goal keep actual water loss to 15% (or less) for the five years beginning in the year 2009 and 12% (or less) for the ten years beginning in the year 2009.

UTILITY PROFILE

CUSTOMER DATA

- Service Area Size – 10.5 square miles
- Current (2008) Estimated Total Population of Service Area – 22,665
- Current (2008) Population Served by the Utility
 - Water – 22,665
 - Wastewater – 22,665
- Population Served by Water Utility for the Previous Five Years

Year	Population
2008	22300 (estimated)
2007	21818
2006	20153
2005	19287
2004	18916

(Estimated populations obtained from the Texas State Data Center, the Office of the State Demographer, and 2000 Census Data for the City of Dickinson)

- Projected Population to be Served by Water Utility for the Next Decades

Year	Population
2010	23000
2020	26680
2030	30950
2040	35900
2050	41650

(Projected population growth estimated at 16% per 10 years increase based on calculated percentage projected growth in Galveston County obtained from Texas State Data Center, the Office of the State Demographer)

ACTIVE CONNECTIONS

- Current Number of Active Connections *(All connections are metered)*
 - Residential Single Family – 7811
 - Residential Multi Family - 78
 - Commercial – 478
 - Public & Institutional – 58
- Total connections - 8425
- Total projected connections by 2015 – 9225
- New connections in the past three years – 138

HIGH VOLUME CUSTOMERS

Customer	Use (1000's gal/yr)	Treated or Raw
Benito & Mary Hernandez	8620	Treated
Benito & Mary Hernandez	5435	Treated
Church Village Apartments	6454	Treated
Courtyard Apartments	4997	Treated
Dickinson Arms Apartments	6759	Treated
DM & LLS Dimos Vervitas	5251	Treated
Fiesta Mobile Home sites	4978	Treated
GreenRiver Assoc. LP	5050	Treated
Penreco Marco-Plant Op	7650	Treated
Shahrokh E. Shadroodi	5647	Treated
Cimarron Country Mobile	4382	Treated
Morningside Village	4882	Treated

WATER USE DATA FOR SERVICE AREA

Water Accounting Data

- Water Use for Previous Five Years (in 1000's gal) – Treated Water Only

	2008	2007	2006	2005	2004
January	48658	62742	76850	67853	73754
February	45090	58168	51424	60615	67871
March	49040	63094	63939	70355	75253
April	47705	66208	87252	75002	74011
May	59340	72150	85626	76567	78732
June	73598	81828	84642	101287	73481
July	69736	59560	82426	85535	81901
August	66745	72044	85411	86423	90618
September	72762	71466	85717	76920	83837
October	65115	62848	76933	94604	81728
November	58848	51256	71998	98210	67800
December	59633	47767	65743	94784	70506
Totals	716270	769131	917961	988155	919492

(Above data were determined by master meters at points of entry)

- Amount of Water (in 1000's gal) delivered (sold) as recorded by account types

Year	Residential	Commercial	Public & Institutional	Wholesale	Other	Total Sold
2008	553825	114035	36354	157687	0	861901
2007	524594	99048	34412	157687	0	815741
2006	556816	96110	46430	165389	0	864745
2005	557388	86819	57507	108272	0	809986
2004	562582	91754	117134	61227	0	832697

- Water Loss Data

Year	Water Loss Amount (Gal)
2008	-145,631,000
2007	-46,610,000
2006	53,716,000
2005	178,169,000
2004	86,795,000

- Peak to Average Daily Use

Year	Average (MGD)	Peak (MGD)	Ratio
2008	1.957	3.423	1.75
2007	2.107	3.725	1.77
2006	2.514	4.276	1.70
2005	2.707	4.482	1.66
2004	2.512	4.522	1.80

- Total Per Capita Use for Previous Five Years

Year	Population	Total Sold less Wholesale (1000's gal)	Per Capita (gpcd)
2008	22300	704214	87
2007	21818	658054	83
2006	20153	699356	95

Year	Population	Total Sold less Wholesale (1000's gal)	Per Capita (gpcd)
2005	19287	701714	100
2004	18916	771470	112

- Seasonal Water Use for Previous Five Years in gallons per capita per day

Year	Population	Base Per Capita Use	Summer Per Capita Use
2008	22300	88	99
2007	21818	97	109
2006	20153	125	140
2005	19287	140	148
2004	18916	133	144

Projected Water Demands

- Projected Water Supply Requirements for Next Ten Years
 - Based on the projected population growth rate for the next ten years the daily average per capita usage will increase to approximately 3.0 MGD. The design capacity of the District's water system is 5.0 MGD which will be adequate supply requirements well in excess of 10 years.

WATER SUPPLY SYSTEM

Water Supply Sources

	Source	Amount Available
Surface Water	N/A	0.0 MGD
Groundwater	4 Water Wells	3.3 MGD
Contracts	Gulf Coast Water Authority	4.66 MGD
Other	N/A	0.0 MGD

Treatment and Distribution System

- Design Daily Capacity of the System – 5.0 MGD
- Water Storage Capacity
 - Elevated – 1.1 MG
 - Ground – 4.532 MG

- Water production system
 - 1 – 0.508 MG Ground Storage Tank (Lobit)
 - 1 – 0.524 MG Ground Storage Tank (Falco)
 - 1 – 0.79 MG Ground Storage Tank (Hollywood)
 - 1 – 2.5 MG Ground Storage Tank (Ecret)
 - 1 – 0.25 MG Ground Storage Tank (West)
 - 1 – 0.35 MG Elevated Storage Tank (Lobit)
 - 1 – 0.75 MG Elevated Storage Tank (Hollywood)
 - 1 – 2,892 GPM Water Supply Lines (GCWA)
 - 1 - 350 GPM Water Supply Lines (GCWA)
 - 4 - Water Wells Total Capacity 3.3 MGD

WASTEWATER UTILITY SYSTEM

- Wastewater System Data
 - Design Capacity of Wastewater Treatment plant: 4.8 million gallons per day
 - The Galveston County Water Control & Improvement District No. 1 owns and operates one wastewater treatment plant located at 4900 Nebraska Street, Dickinson, Texas.
 - Disinfection of the treated effluent is achieved by chlorination.
 - The effluent discharge point is located 4900 Nebraska Street, Dickinson, Texas, discharging into Dickinson Bayou.
 - The District's current NPDES permit number is:
 - TCEQ – TPDES 10173-001 Issued: September 1, 2005
 - Expires: September 1, 2010
 - EPA ID No. – TX 0023655
 - Dewatered sludge and solids are disposed in a Type 1 municipal landfill.

Wastewater Data for Service Area

- Percent of water service area served by wastewater utility system – 99.9%.
- Percent of water service area served by septic systems – 0.1%

- Monthly volume treated for previous three years in 1000's gallons

	2008	2007	2006
January	3325.58	3207.01	1594.78
February	2822.13	1874.74	1234.05
March	2057.0	2284.3	1136.4
April	1326.85	2702.83	1199.254
May	1113.118	1533.24	1685.734
June	1451.08	1669.9	1563.47
July	1266.6305	3119.11	3288.703
August	2016.904	2425.31	2067.64
September	1897.11	2314.71	1659.404
October	1266.92	2106.68	3063.639
November	1794.54	1599.819	1331.21
December	1284.91	2041.05	1634.78
Totals	21622.77	26878.7	21459.064

WATER CONSERVATION PLAN

INTRODUCTION

The purpose of a Water Conservation Plan is to reduce the quantity required for each water using activity, insofar as is economically feasible and physically practical, through the implementation of efficient water use practices. Many communities throughout the United States have used conservation measures to successfully cope with various water and wastewater problems.

Reduction in water use of as much as 25% or more has been achieved, but the normal range is from 5 to 15%. As a result of reduced water use, wastewater flows have also been reduced by 5 to 10%.

Nine (9) principal water conservation methods to be considered in preparing a water conservation plan are as follows:

- Education and Information
- Plumbing codes for new construction
- Retrofit programs
- Conservation oriented water rate structures
- Universal metering and meter repair and replacement
- Water conserving landscaping
- Leak detection and repair
- Recycling and reuse
- Means of implementation and enforcement

CONSERVATION GOALS

- 2008 per capita water use - 87 gallons per capita per day (gpcd)
- Projected 5 year average per capita water use from 2009 - 85 gpcd
- Projected 10 year average per capita water use from 2009 - 83 gpcd
- Projected 5 year average water loss from 2009 – 15% (or less)
- Projected 10 year average water loss from 2009 – 12% (or less)

Conservation is expected to be a long term program, with a time frame of at least ten years duration. It is expected to take ten years to obtain the full benefits of applying retrofits and replacing fixtures in the community, as well as getting the community to practice water conservation techniques.

The District will encourage all new construction or substantial modification to use water saving plumbing fixtures, e.g. low flow toilets, showerheads, and faucets. Owners of existing structures will be encouraged to retrofit with water-saving devices. High consumption users will be identified and encouraged to retrofit with water-saving devices. The District will investigate and identify uses for recycled water for public and institutional irrigation. Owners of new construction or substantial modification will be encouraged to use xeriscape landscaping incorporating the seven basic principles that lead to saving water:

- Planning & Design
- Soil Analysis
- Practical Turf Areas
- Appropriate Plant Selection
- Efficient Irrigation
- Use of Mulches
- Appropriate Maintenance

Low flow designs will be encouraged for new irrigation systems. High consumption irrigation users will be identified and encouraged to modify their designs to reduce consumption. The following percentage reductions can be used for estimating projected consumption:

Costing and pricing	3% reduction
Conservation practices	2% reduction
Retrofits (toilets, showerheads, faucets)	2% reduction
Outdoor irrigation reduction	2% reduction
<u>Fixture replacements</u>	<u>1 % reduction</u>
<u>Total</u>	<u>10% reduction</u>

The basis for estimates of savings is the USEPA Water Conservation Guidelines. However, the recorded per capita use in the District is very low compared with the state average and it would be difficult to achieve reductions as high as 10%.

The District will monitor monthly the efficiency and effectiveness of the Water Conservation Plan by comparing with previous consumption patterns. The success of the Water Conservation Plan can thus be gauged, and any necessary changes made.

PUBLIC INVOLVEMENT

The District holds regular Board Meetings on the third Monday of each month at 6:00 P.M. Meetings are open to the public, and citizens are free to speak on any subject during the portion of the meeting designated for this purpose. The draft Plan will be posted on The District's

Internet Web Site and a press release advertising the internet posting will be made to the local news agencies.

WATER CONSERVATION METHODS

Water conservation methods are typically divided into two (2) categories, Demand Management Methods and Supply Management Methods. Demand Management methods deal with water use on the downstream side of a customer's meter. Demand management provides for education or incentives to reduce water use by the consumer. This method of conservation generally results in a decrease in water revenues because less water is purchased from The District.

Supply Management Methods deals with the utility's water system upstream of the customer's meter. The goal of Supply Management is to improve efficiency and reduce waste within the production, treatment, and distribution system. Supply management usually results in decreased costs to the utility as water losses in the system are reduced.

DEMAND MANAGEMENT METHODS

Demand Management Methods considered in the GCWCID#1 Conservation Plan include the following:

- Public Education and Information
- Plumbing Codes
- Retrofit Programs
- Water Rate Structure
- Water Conserving Landscaping

Public Education and Information

The most readily available and lowest cost method of promoting water conservation is to inform water users about ways to save water inside homes and other buildings, in landscaping and lawn uses, and in recreational uses. An effective education and information program can be easily and inexpensively administered by The District. Materials available from the Texas Water Development Fund, American Water Works Association, American Public Works Association and other similar associations can easily be made available to The District for distribution to its customers, through hand outs, mail outs, and other sources. The District publishes its own newsletter which is distributed bi-annually. This newsletter, called the Water Supply, keeps

customers informed about what is happening in The District. This publication can be used to print articles concerning water conservation. The District also maintains a Web Site (www.wcid1.com) which is updated on a regular basis which has a page dedicated to Water Conservation. The Water Conservation Plan will be published on the Web Site.

Various radio stations in the area, together with public and cable television systems, can also be utilized for this purpose. Educational materials will be made available twice a year. The semi-annual distribution will be timed to correspond with the peak summer and winter demand periods. The initial pamphlet will explain the purpose of the Conservation Plan, and will coincide with a published article which will present various water conserving methods, including plumbing fixtures and devices available for retrofit or addition, water conserving methods in landscaping and irrigation, and good water use practices to conserve water. The District will develop and acquire sufficient educational materials for district-wide distribution. The materials will be made available on request by all users.

The program will cover the Water Conservation Tips listed in Attachment B. The District will put special emphasis on the need to insulate pipes to prevent freezing in cold weather, retrofitting of plumbing fixtures and devices, and landscaping conservation methods. The energy savings associated with a water conservation program will also be emphasized.

The District sponsors the Water Smart Education Program taught by the Subsidence District in two Junior High schools in the District. The District also sponsors a water conservation book cover art contest at one of the Junior High schools in the District.

Plumbing Codes

Water saving plumbing codes for new construction and for replacement of plumbing in existing structures has been adopted. The standards recommended by the Texas Water Development Board represent readily available technologies and do not involve additional costs when compared with "standard" fixtures. Water conserving plumbing codes can be specifically tailored to be adopted by each individual entity, in addition to the 2006 International Plumbing Codes and 2006 International residential Codes which are currently in place. The District will continue to work to promote the use of the Plumbing Codes for all its water users. The state-wide water conserving fixture standards will also aid in this effort.

Retrofit Programs

The District will make information available through its education program for plumbers and customers to use when purchasing and installing plumbing fixtures, lawn watering equipment, or water using appliances. Information regarding retrofit devices such as low-flow shower heads or toilet dams that reduce water use by replacing or modifying existing fixtures or appliances will also be provided. Kits containing retrofit devices may be made available for distribution to customers.

Water Rate Structure

A water conservation oriented rate structure usually takes the form of an increasing block rate, although continuously increasing rate structures, peak or seasonal load rates, excess use fees, and other rate forms can be used. Separate rate structures are usually used for commercial, institutional, and industrial customers. The District will continue to support a conserving water rate structure and, when appropriate, review its rates for policy consistency. The rate is reviewed annually to insure that it still fits the standard for conservation as proposed by the TCEQ.

Water Conserving Landscaping

In order to reduce the demands placed on a water system by landscape watering, The District should consider methods that either encourage, by education and information, or require, by code or ordinance, water conserving landscaping by residential customers and commercial establishments engaged in the sale or installation of landscape plants or watering equipment.

Although not made a specific section of the Conservation Plan, water conserving landscaping information will be made available through the Public Education and Information Section found later in this plan.

SUPPLY MANAGEMENT METHODS

Supply Management Methods considered in the GCWCID#1 Water Conservation Plan include the following:

- Universal metering
- Leak Detection and Repair
- Aquifer recovery

Universal Metering

The District has installed and maintains Master Meters on all sources. All sales by The District are metered. The District has a regular meter replacement program and all master meters are calibrated annually to $\pm 3\%$. Any meter registering 95% or less on a meter test is replaced. Groups of meters are spot tested. All meters are scheduled for replacement with each annual budget preparation in groups by those that have 95% or less accuracy, by age and by volume of water metered.

Leak Detection and Repair

A continuous leak detection, location, and repair program is an important part of our water conservation plan. An annual water accounting is performed each year. Sources of unaccounted for water are, once located, corrected when practicable and economical.

District utility employees periodically check for leaks when reading meters and when driving around The District during regular maintenance. Major leaks are usually quickly detected by either District employees or customers and are repaired within 24 hours. Leak detection technology is also available in the form of electronic sonic devices are utilized.

Recycling and Reuse

The District reuses water at the WWTP saving approximately 1 MG per month. The District has reviewed the potential for other reuse and it is currently not considered economically feasible at this time.

Aquifer Recovery

The District has implemented a program to generate a very positive effect on the area aquifer. At the direction of the Harris-Galveston Coastal Subsidence District, The District has entered into a contract with the GCWA to purchase surface water. The Subsidence District has mandated that The District use only 10% of its potable water from deep wells and purchase the remaining 90% from a surface water source, in this case the GCWA. Such purchases began in 1983.

IMPLEMENTATION/ENFORCEMENT

IMPLEMENTATION

The District will administer its own Water Conservation Program. In this capacity, it will oversee the execution and implementation of all elements of the program. The District will also oversee record keeping for program verification.

In addition, The District will be responsible for the submission of an annual report to the Texas Commission on Environmental Quality on the Water Conservation Plan. The report will include the following elements:

- Progress made in the implementation of the program
- Response to the program by the public
- Quantitative effectiveness of the program
- Proposed administration and goals of plan for the following year

The program will be initiated through adoption of the Water Conservation Plan by Ordinance by the GCWCID#1 Board of Directors.

The budget for the water conservation plan should be approximately \$5,000 annually to be funded by The District.

ENFORCEMENT

Enforcement will be carried out through proper passage of appropriate Ordinances. Any violation of the mandatory provisions of the Drought Contingency Plan may result in a penalty and/or interruption of water service. The District Manager is empowered to enforce the mandatory provisions and may interrupt water service based upon repeated violations. Penalties shall be paid before water service is restored. Violations will be reported by all District personnel to the General Manager.

**WATER CONSERVATION AND DROUGHT CONTINGENCY PLAN FOR GALVESTON
COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 1**

ORDINANCE NO. _____

AN ORDINANCE FINDING AND DETERMINING THAT THE WATER CONSERVATION AND DROUGHT CONTINGENCY PLAN FOR GALVESTON COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 1, DICKINSON, TEXAS, A COPY OF WHICH IS ATTACHED HERETO AND MARKED EXHIBIT "A", HAS BEEN PREPARED IN ACCORDANCE WITH ALL APPLICABLE LAWS, RULES, REGULATIONS, STANDARDS AND GUIDELINES PROMULGATED BY APPROPRIATE AUTHORITY, AND FURTHER, THAT SUCH PLAN IS ADEQUATE TO PROVIDE AN EFFECTIVE MEANS FOR WATER CONSERVATION AND DROUGHT CONTINGENCY WITHIN THE DISTRICT LIMITS OF GALVESTON COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 1, ADOPTING THE SAME AS THE OFFICIAL WATER CONSERVATION AND DROUGHT CONTINGENCY PLAN FOR GALVESTON COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 1, DICKINSON, TEXAS, AND REQUIRING ADHERENCE TO ALL REQUIREMENTS, CONDITIONS AND PROCEDURES SPECIFIED THEREBY.

WHEREAS, heretofore previously, Galveston County Water Control and Improvement District No. 1 has undertaken such studies and surveys as were necessary to determine appropriate facts upon which to base and develop a Water Conservation and Drought Contingency plan for Galveston County Water Control and Improvement District No. 1; and

WHEREAS, as a result of such preliminary work, a Water Conservation and Drought Contingency plan has been prepared, which fairly represents a sound policy for Galveston County Water Control and Improvement District No. 1;

NOW, THEREFORE,

BE IT ORDAINED BY THE BOARD OF DIRECTORS OF GALVESTON COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 1, DICKINSON, TEXAS:

- 1- That the Board of Directors of Galveston County Water Control and Improvement District No. 1 hereby finds and determines that the Water Conservation and Drought Contingency plan, a copy of which is attached hereto and marked Exhibit "A", has been prepared in accordance with all applicable laws, rules, regulations, standards and guidelines promulgated by appropriate authority.
- 2- That the Board of Directors of Galveston County Water Control and Improvement District No. 1 further finds and determines that the said Water Conservation and Drought Contingency plan is adequate to provide an effective means for water conservation and drought management within the district limits of Galveston County Water Control and Improvement District No. 1.
- 3- That the Water Conservation and Drought Contingency plan, a copy of which is attached hereto and marked Exhibit "A", is hereby adopted as the official Water Conservation and Drought Contingency Plan Galveston County Water Control and Improvement District No. 1, Dickinson, Texas.
- 4- Further, that all of the requirements, conditions and procedures specified in the attached Water Conservation and Drought Contingency Plan for Galveston County Water Control and Improvement District No. 1 shall be adhered to by all persons affected thereby, including but not limited to all residents, citizens and inhabitants of the Galveston County Water Control and Improvement District No. 1.

- 5- Penalty. Any person, firm, partnership, association, corporation, company, or organization of any kind who or which intentionally, knowingly, recklessly, or with criminal negligence violates any of the provisions of this Ordinance shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be fined in an amount not to exceed the jurisdiction of the Justice Court. The penalty may be in addition to any other penalty provided by the law of this state and may be enforced by complaints filed in the appropriate Court of Jurisdiction in Galveston County. In addition, if the District prevails in any suit to enforce this Plan, it may recover reasonable fees for attorneys, expert witnesses, and other costs incurred by the District. Galveston County Water Control & Improvement District No. 1 shall be entitled to seek injunctive relief in the appropriate Court of Galveston County in order to prevent violations of this Plan. The owner or owners of any property or premises and any agent, contractor, builder, architect, person, or corporation who shall assist in the commission of such offense shall be guilty of a separate offense, and upon conviction thereof, shall be punished as above provided.
- 6- Severability. In the event any section, paragraph, subdivision, clause, phrase, provision, sentence, or part of this Ordinance or the application of the same to any person or circumstances shall for any reason be adjudged invalid or held unconstitutional by a court of competent jurisdiction, it shall not affect, impair, or invalidate this Ordinance as a whole or any part or provision hereof other than the part declared to be invalid or unconstitutional; and the Board of Directors of Galveston County Water Control and Improvement District No. 1, Dickinson, Texas, declares that it would have passed each and every part of the same notwithstanding the omission of any such part thus declared to be invalid or unconstitutional, or whether there be one or more parts.
- 7- Repealer. All ordinances or parts of ordinances inconsistent or in conflict herewith are, to the extent of such inconsistency or conflict, hereby repealed.

PASSED and APPROVED this, the _____ day of _____ 2010.

President, Galveston County Water Control and Improvement District No. 1, Dickinson, Texas

ATTEST:

DROUGHT CONTINGENCY PLAN

Section 1 - Declaration of Policy, Purpose, and Intent

In cases of extreme drought, periods of abnormally high usage, system contamination, or extended reduction in ability to supply water due to equipment failure, temporary restrictions will be instituted to limit non-essential water usage. The purpose of the Drought Contingency Plan is to encourage, and under emergency conditions require, customer conservation in order to maintain supply, storage, or pressure.

Section 2 - Public Involvement

Opportunity for the public to provide input into the preparation of the Plan was provided by posting of Notice of Board Meeting to approve ordinance adopting Drought Contingency Plan.

The meeting took place at:

Date: January 20, 2010

Time: 6:00 PM

Place: Joint City Hall/Water District Facility at 4403 Hwy 3, Dickinson, TX.

Section 3 - Public Education

The District 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.

Drought plan information will be provided by press release and utility bill notice advising of availability of plan on internet web site or from Utility Billing Office. Additional information will be provided at various sponsored events throughout The District.

Section 4 - Coordination with Regional Water Planning Groups

The service area of The District is located within Regional Water Planning Group H and a copy of this plan has been mailed to this planning group.

Section 5 - Notice Requirements

Notice will be provided to each customer **prior to implementation or termination of each stage of the water restriction program**. Notice will be provided through posting on District web site, news release to radio, television and newspaper. The notice will include:

- The date restrictions will begin
- The circumstances that triggered the restrictions
- The stages of response and explanation of the restrictions to be implemented
- An explanation of the consequences for violations.

The utility will notify the TCEQ by telephone at (512) 239- 6020, or electronic mail at watermon@TCEQ.state.tx.us upon implementation the program and will notify in writing the Public Drinking Water Section at MC - 155, P.O. Box 13087, Austin, Texas 78711-3087 within five (5) working days of implementation including a copy of the utility's restriction notice. The utility must file a status report of its restriction program with the TCEQ every 30 days that restriction continues.

Section 6 - Violations

First violation - The customer will be notified by written notice of their specific violation.

Subsequent violations:

- A court citation will be issued for violation of this Ordinance and may result in a fine of up to \$500.00 per day the violation continues.
- Continued violations may result in termination of water service.

Section 7 - Exemptions or Variances

The District Board of Directors may grant variance from requirements of this Plan in accordance with the same standards and procedures applicable to building-related variances; see Chapter 6 of the Code of Ordinances. An applicant who is refused a variance may appeal such action to the District. Any person seeking an exemption from this Plan may apply in writing to the District Board of Directors and must demonstrate good cause for the exemption. The District Board of Directors will treat all customers equally concerning exemptions and variances, and shall not discriminate in granting exemptions and variances. No exemption or variance shall be retroactive or otherwise justify any violation of this Plan occurring prior to the issuance of the exemption or variance.

Section 8 - System Supply Strategy

The District water system is supplied with a combination of well water and surface water. The well water is supplied by water wells owned and operated by the system and can safely supply our annual daily average. The Surface water supply is through a purchase agreement with the GCWA, Texas and this supply can safely supply our daily annual average. With limitations on either of these supplies during peak pumping seasons it may be necessary to implement water usage restrictions. The District has five pump stations that can pump well water, surface water or a combination of both. The Pump Stations can safely supply the daily average flow but may require usage restrictions in the event of equipment outages during peak water pumping seasons.

Section 9 - Response Stages

The District will communicate Stage I concepts each year. If, supply or demand triggers are met The District will initiate the appropriate elevated Stage of restrictions.

STAGE I – ANNUAL DROUGHT AND CONSERVATION AWARENESS CAMPAIGN

Utility Measures

A public announcement will be issued every April to increase customer awareness of water conservation and encourage the most efficient use of water. This announcement will include information on obtaining an electronic or paper copy of this Plan. A copy of the current public announcement on water conservation awareness shall be kept on file available for inspection by the TCEQ.

Voluntary Water Conservation

Water customers are encouraged to practice water conservation.

STAGE II - VOLUNTARY WATER USE RESTRICTIONS

Stage II is designed to encourage customers to conserve water during periods when water supplies are unusually limited. Stage 2 will begin when:

Supply-Based Triggers

- The District initiates voluntary water restrictions.

Demand- or Capacity-Based Triggers

- Total daily demand – 85% of pumping capacity for three (3) consecutive days.

Upon initiation and termination of Stage II, notify all customers by placing notice on District’s web site and by Emergency Telephone Communication System (ETCS) or by press release to the local media.

Requirements for termination

Stage II of the Plan may end when all of the conditions listed as triggering events have ceased to exist for a period of five (5) consecutive days.

Utility Measures

- Visually inspect lines and repair leaks on a daily basis.

Voluntary Water Use Restrictions

- Voluntary Restricted Hours: Outside watering is allowed daily, and encouraged to water only during the hours between 10:00 PM and 5:00 AM.

STAGE III - MODERATE WATER USE RESTRICTIONS

Stage III is designed to take affirmative steps to control the use of water in response to a period of significant water shortage. Stage 3 will begin when:

Supply-Based Triggers

- Equipment outage reduces well capacity by 50% or purchased water intake is limited to less than 75% of standard average draw rates.

Demand- or Capacity-Based Triggers

- Total daily demand - 90% of pumping capacity for three (3) consecutive days.

Upon initiation and termination of Stage III, notify all customers by placing notice on District’s web site and by ETCS or by press release to the local media.

Requirements for termination

Stage III of the Plan may end when all of the conditions listed as triggering events have ceased to exist for a period of five (5) consecutive days. Upon termination of Stage 3, Stage II may become operative.

Utility Measures

- Visually inspect lines and repair leaks on a daily basis.
- Water line flushing is prohibited except for dead end mains or identified quality control issues

Mandatory Water Use Restrictions

The following water use restrictions shall apply to all customers:

- Outside watering is allowed daily, but only during the hours between 10:00 PM and 5:00 AM. Watering of plants and landscaping shall be allowed with a hand held water hose between the hours of 7:00 PM and Midnight and the hours of Midnight and 10:00 AM.
- Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle is prohibited except between the hours of 7:00 PM and 10:00 a.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 rinses. 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.
- Use of water to fill, refill, or add to any indoor or outdoor swimming pools, wading pools, or "Jacuzzi" type pools is prohibited except between the hours of 12:00 midnight and 10:00 a.m.
- 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 re-circulation system.
- Use of water from hydrants or flush valves shall be limited to maintaining public health, safety, and welfare.
- Use of water for the irrigation of parks, and green belt areas is prohibited except between the hours 12:00 midnight and 5:00 a.m. and between 8 p.m. and 12:00 midnight.
- The following non-commercial uses of water are defined as non-essential and are prohibited:
 - Wash down of any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas
 - Use of water to wash down buildings or structures for purposes other than immediate fire protection

- Use of water for dust control
- Flushing gutters or permitting water to run or accumulate in any gutter or street
- Failure to repair a leak(s) within 72 hours after having been given notice directing the repair of such leak(s).

STAGE IV – CRITICAL WATER USE RESTRICTIONS

Stage IV is designed to take significant steps to control the use of water in response to periods of critical water shortage. Stage IV will begin when:

Supply-Based Triggers (Either condition may trigger restrictions)

- Supply contamination
- Equipment outage reduces well capacity by 100% or purchased water intake is limited to less than 60% of standard average draw rates

Demand- or Capacity-Based Triggers (Either condition may trigger restrictions)

- Total daily demand as 95% of pumping capacity for (3) three consecutive days
- Production or distribution limitations
- System outage.

Upon initiation and termination of Stage IV, notify all customers by placing notice on District’s web site and by ETCS or by press release to the local media, and the TCEQ.

Requirements for Termination

Stage IV of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of five (5) consecutive days. Upon termination of Stage IV, Stage II or Stage III may become operative.

Operational Measures

The utility shall visually inspect lines and repair leaks on a daily basis. Water line flushing is prohibited except for identified water quality issues and only between the hours of 9:00 p.m. and 3:00 a.m. Police and District personnel will be asked to maintain vigilance for violations of the water restrictions.

Mandatory Water Use Restrictions

- All outdoor use of water is prohibited
- Irrigation of landscaped areas is absolutely prohibited
- Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle is absolutely prohibited

APPENDIX A

WATER CONSERVATION & DROUGHT MANAGEMENT INFORMATION SOURCES

Texas Water Development Board
P.O. Box 13231
1700 N. Congress Ave.
Austin Tx 78711-3231
(512) 463 7847 voice
(512) 4752053 fax
www.twdb.state.tx.us

Texas Commission on Environmental Quality
P.O. Box 13087
Austin Tx 78711-3087
(512) 239 1000
www.tceq.state.tx.us

Water Resource Center
U.S. EPA
Mail Code RC-41 00
401 M Street, S.W.
Washington, D.C. 20460
Telephone: (202) 260-7786
Fax: (202) 260-0386
e-mail: waterpubs@epamail.epa.gov
www.epa.gov/ow

American Water Works Association
6666 West Quincy Ave.
Denver Co 80235
(303) 794 7711
www.awwa.org

APPENDIX B

WATER CONSERVATION TIPS

Suggestions on ways to save water which may be included in public information are listed below.

A. Bathroom

- a. Take a shower instead of filling the tub and taking a bath. Showers usually use less water than tub baths.
- b. Install a low-flow shower head which restricts the quantity of flow at 60 psi to no more than 3.0 gallons per minute.
- c. Take short showers and install a cutoff valve or turn the water off while soaping and back on again only to rinse.
- d. Do not use hot water when cold will do. Water and energy can be saved by washing hands with soap and cold water; hot water should only be added when hands are especially dirty.
- e. Reduce the level of the water being used in a bath tub by one or two inches if a shower is not available.
- f. Turn water off when brushing teeth until it is time to rinse.
- g. Do not let water run when washing hands. Instead, hands should be wet, and water should be turned off while soaping and scrubbing and turned on again to rinse. A cutoff valve may also be installed on the faucet.
- h. Shampoo hair in the shower. Shampooing in the shower takes only a little more water than is used to shampoo hair during a bath and much less than shampooing and bathing separately.
- i. Hold hot water in the basin when shaving instead of letting the faucet continue to run.
- j. Test toilets for leaks. To test for a leak, a few drops of food coloring can be added to the water in the tank. The toilet should not be flushed. The customer can then watch to see if the coloring appears in the bowl within a few minutes. If it does, the fixture needs adjustment or repair.
- k. Use a toilet tank displacement device. A one-gallon plastic milk bottle can be filled with stones or with water, recapped, and placed in the toilet tank. This will reduce the amount of water in the tank but still provide enough for flushing. (Bricks, which some people use for this purpose, are not recommended, since

they crumble eventually and could damage the working mechanism. Displacement devices should never be used with new low-volume flush toilets.

- l. Install faucet aerators to reduce water consumption.
- m. Never use the toilet to dispose of cleaning tissues, cigarette butts, or other trash. This can waste a great deal of water and also places an unnecessary load on the wastewater treatment plant.
- n. Install a new low-volume toilet that uses 1.6 gallons or less per flush when building a new home or remodeling a bathroom.

B. Kitchen

- a. Use a pan of water (or place a stopper in the sink) for rinsing pots and pans and cooking implements when cooking rather than turning on the water faucet each time a rinse is needed.
- b. Never run the dishwasher without a full load. In addition to saving water, expensive detergent will last longer and a significant energy saving will appear on the utility bill.
- c. Use the sink disposal sparingly, and never use it for just a few scraps.
- d. Keep a container of drinking water in the refrigerator. Running water from the tap until it is cool is wasteful. Better still, both water and energy can be saved by keeping cold water in a picnic jug on a kitchen counter to avoid opening the refrigerator door frequently
- e. Use a small pan of cold water when cleaning vegetables rather than letting the faucet run.
- f. Use only a little water in the pot and put a lid on it for cooking most food. Not only does this method save water, but food is more nutritious since vitamins and minerals are not poured down the drain with the extra cooking water.
- g. Use a pan of water for rinsing when hand-washing dishes rather than running the faucet.
- h. Always keep water conservation in mind, and think of other ways to save in the kitchen. Small kitchen savings from not making too much coffee or letting ice cubes melt in a sink can add up over a year's time.

C. Laundry

- a. Wash only a full load when using an automatic washing machine (32 to 59 gallons are required per load).

- b. Use the lowest water level setting on the washing machine for light loads whenever possible.
- c. Use cold water as often as possible to save energy and to conserve the hot water for uses which cold water cannot serve. (This is also better for clothing made of today's synthetic fabrics.)

D. Appliances and Plumbing

- a. Check water requirements of various models and brands when considering purchasing any new appliance that uses water. Some use less water than others.
- b. Check all water connections and faucets for leaks. A slow drip can waste as much as 170 gallons of water EACH DAY, and can add as much as \$10.00 per month to the water bill.
- c. Learn to replace washers so that drips can be corrected promptly. It is easy to do, costs very little, and can represent a substantial amount saved in plumbing and water bills.
- d. Check for water leakage you may be unaware of, such as a leak between the water meter and the house. To check, all indoor and outdoor faucets should be turned off, and the water meter should be checked. If it continues to run or turn, a leak probably exists and needs to be located.
- e. Insulate all hot water pipes to avoid the delays (and wasted water) experienced while waiting for the water to turn hot.
- f. Be sure the hot water heater thermostat is not set too high. Extremely hot settings waste water and energy because the water often has to be cooled with cold water before it can be used.
- g. Use a moisture meter to determine when house plants need water. More plants die from over-watering than from being on the dry side.

E. Out-of-Doors Use

- a. Water lawns between the hours of 8:00 pm to 6:00 am during the hotter summer months. Much of the water used on the lawn can simply evaporate between the sprinkler and the grass.
- b. Use a sprinkler that produces large drops of water, rather than a fine mist, to avoid evaporation.
- c. Turn soaker hoses so the holes are on the bottom to avoid evaporation.
- d. Water slowly for better absorption, and never water in high winds.

- e. Forget about watering the streets, walks, and driveways. They will never grow a thing.
- f. Condition the soil with compost before planting grass or flower beds so that water will soak in rather than run off.
- g. Fertilize lawns at least twice a year for root stimulation. Grass with a good root system makes better use of less water.
- h. Learn to know when grass needs watering. If it has turned a dull gray-green or if footprints remain visible, it is time to water.
- i. Do not water too frequently. Too much water can overload the soil so that air cannot get to the roots and can encourage plant diseases.
- j. Do not over-water. Soil can absorb only so much moisture and the rest simply runs off. A timer will help, and either a kitchen timer or an alarm clock will do. An inch and one-half of water applied once a week will keep most Texas grasses alive and healthy.
- k. Operate automatic sprinkler systems only when the demand on the town's water supply is lowest. Set the system to operate between 4 and 6 am.
- l. Do not scalp lawns when mowing during hot weather. Taller grass holds moisture better. Rather, grass should be cut fairly often, so that only 1 to 2 inches is trimmed off. A better looking lawn will result.
- m. Use a watering can or hand water with the hose in small areas of the lawn that need more frequent watering (those near walks or driveways or in especially hot, sunny spots).
- n. Learn what types of grass, shrubbery, and plants do best in the area and in which parts of the lawn, and then plant accordingly. If one has a heavily shaded yard, no amount of water will make roses bloom. In especially dry sections of the state, attractive arrangements of plants that are adapted to arid or semi-arid climates should be chosen.
- o. Consider decorating areas of the lawn with rocks, gravel, wood chips, or other materials now available that require no water at all.
- p. Do not "sweep" walks and driveways with the hose. Use a broom or rake instead.
- q. Use a bucket of soapy water and use the hose only for rinsing when washing the car.