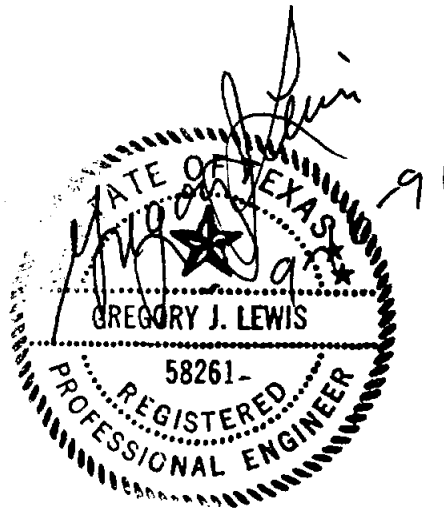


**WATER CONSERVATION AND
DROUGHT CONTINGENCY PLANS FOR
UPPER LEON RIVER
MUNICIPAL WATER DISTRICT
VOLUME V**

SEPTEMBER, 1991



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Engineering and Environmental Consultants**

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REGIONAL WASTEWATER STUDY

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SECTION 1.0
INTRODUCTION

1.0 INTRODUCTION

The Upper Leon River Municipal Water District (ULRMWD) is undertaking a comprehensive study of the water quality of Lake Proctor. As a part of an application by the ULRMWD to the Texas Water Development Board (TWDB) for financial assistance from the Development Fund or the Water Loan Assistance Fund, the ULRMWD has developed required water conservation and drought contingency plans. The origin of the plan requirements is legislation promulgated by the 69th Texas Legislature in 1985. The requirements were established by House Bill 2 and House Joint Resolution 6. Texas voters, on November 5, 1985, approved the amendment to the Texas Constitution that provided for the implementation of House Bill 2.

The plan is submitted in accordance with TWDB financial assistance rules and has been prepared in accordance with the guidelines for developing water conservation and drought contingency plans and programs.

1.1 Objective

The objective of a water conservation plan is to reduce the volume of water used in the residential and commercial sector in all activities through the use of water saving practices and equipment. Water use activities include drinking, bathing, cooking, toilet flushing, lawn watering, washing, fire protection, swimming, laundry, dish washing, and car washing.

Water conservation measures may result in reduction of water usage of 25 percent or more. The average reduction, however, is in the range of five to 15 percent. Average wastewater flows are reduced by five to ten percent. The goal of the water conservation plan for the ULRMWD is to reduce water usage and wastewater returns by at least five percent.

The nine principal water conserving 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; and
- ◆ Means of implementation and enforcement.

A drought contingency plan is intended to promote orderly reduction in water usage under emergency conditions. Emergency conditions may be necessitated by drought conditions or by failure of the distribution system. An effective drought contingency plan will include the following elements:

- ◆ Trigger conditions signaling the start of an emergency period;
- ◆ Drought contingency measures;
- ◆ Information and education;
- ◆ Initiation procedures;
- ◆ Termination notification actions; and
- ◆ Means of implementation and enforcement.

The ULRMWD has been given the authority to require its customers to adopt the water conservation and drought contingency plan by Section 17.125(e) of the Texas Water Code.

1.2 Planning Area

The ULRMWD currently owns and operates water treatment and transmission facilities which draw water from Lake Proctor in Comanche county. This water is purchased from the Brazos River Authority, and the majority of the treated water produced is sold wholesale to the cities of Comanche, DeLeon, Dublin, Gorman, Hamilton and Proctor. The ULRMWD has 388 metered customers including several buyers of untreated irrigation water. The utility information

supplied in this plan pertains only to the metered customers of the ULRMWD and not to its wholesale customers. The service area covers parts of Comanche, Erath and Hamilton counties. The ULRMWD also operates a 60,000 GPD package wastewater treatment facility serving the Par community just south of Lake Proctor.

1.3 Utility Evaluation Data

- ◆ Population of Service Area - 1048

- ◆ Number and Type of Equivalent 5/8 inch Meter Connection in Service Area
 - Residential: 368
 - Commercial: 8
 - Agricultural: 3

- ◆ Net Rate of New Connection Additions Per Year (New Connections Less Disconnects)
 - Residential: 12
 - Commercial: 0
 - Agricultural: 0

- ◆ Water Use Information
 - Water Production for the Last Year: 550,693,309 gallons (FY 1990)

 - Average Water Production for Last 2 Years: 562,982,060 gallons (FY 1989 and 1990)

 - Average Monthly Water Production for Last 2 Years: 46,915,000 gallons

- **Estimated Monthly Water Sales (FY 90) by User Category (gallons):**

<i>Month</i>	<i>Residential</i>	<i>Commercial</i>	<i>Agricultural Industrial*</i>	<i>Municipal Wholesale</i>	<i>Total</i>
January	1,735,710	364,000	622,000	34,860,990	37,582,700
February	1,870,430	364,170	483,000	32,907,675	35,625,275
March	1,544,029	339,880	2,097,000	31,497,165	35,478,074
April	2,143,698	514,760	3,456,000	31,500,900	37,615,349
May	1,883,870	716,570	8,026,000	45,627,900	56,254,340
June	2,827,330	565,930	9,038,600	58,988,700	71,420,560
July	3,288,340	617,710	14,831,000	60,130,600	78,867,650
August	2,337,360	458,510	9,540,000	59,285,800	71,621,670
September	2,675,270	648,250	12,986,000	41,882,600	58,192,120
October	1,753,930	514,980	4,031,000	44,622,000	50,921,910
November	1,562,500	347,690	1,373,000	32,236,800	35,519,990
December	1,306,790	425,310	435,000	29,905,600	32,072,700

* Untreated Water

- Average Daily Water Use - 1,508,747 gallons (FY 90)
- Peak Daily Use - 2,427,071 (FY 90)
- Peak to Average Use Ratio (Average Daily Summer Use Divided by Annual Average Daily Use) - 1.41
- Unaccounted for Water (% of Water Production) - 15.3%

◆ Wastewater Information

- Percent of Potable Water Customers Sewered by ULRMWD Wastewater Treatment System - 13%
- Percent of Potable Water Customers who have Septic Tanks or Other Privately Operated Sewage Disposal System - 87%

- **Percent of Total Potable Water Sales in the Two Categories Described Above:**
 - **Percent of Total Sales to Customers Served by the ULRMWD - 13%**
 - **Percent of Total Sales to Customers who are on Septic Tanks or Private Disposal Systems - 87%**

- **Average Daily Volume of Wastewater Treated - 10,000 gallons**

- **Peak Daily Wastewater Volumes - 11,000 gallons**

- **Estimated Percent of Wastewater Flows to ULRMWD Treatment Plant that Originate from the Following Categories:**
 - **Residential: 100%**
 - **Industrial and Manufacturing: 0%**
 - **Commercial/Institutional: 0%**
 - **Stormwater: 0%**
 - **Other: 0%**

◆ Population and Wastewater Volume Projection:

<i>Year</i>	<i>Population</i>	<i>Wastewater Projections (gpd)</i>
1991	175	11,000
2000	197	19,700
2010	219	21,900
2020	241	24,100

◆ Peak Daily Design Capacity of Water System - 5,200,000

◆ Percent of Water Supply Connections in System Metered

- Residential: 100%
- Commercial: 100%
- Agricultural: 100%

◆ Water and Wastewater Rate Structure

The district currently has a decreasing block rate structure for water rates.

Water Rate Schedule - Decreasing Block

0-3,000 gallons	(minimum charge)	\$20.82
next 2,000 gallons		\$3.38/1000
next 5,000 gallons		\$2.79/1000
next 5,000 gallons		\$2.35/1000
remainder		\$2.00/1000

The commercial rate is \$1.59/1000 gallons, with a monthly minimum of \$106.03 for the first 62,000 gallons.

1.4 System Audit/Problems

1.4.1 Average, Seasonal, and Peak Use Patterns

From the water use information provided earlier, it is clearly evident that the months of August, September, and October were the peak use periods followed by June and July. The peak to average use rate for the year was 1.41.

1.4.2 Unaccounted Water Volume and Likely Causes

The unaccounted volume of water for the ULRMWD is estimated to be 15 percent. This figure is derived from the difference between water purchased and water sold by the ULRMWD. Some error may exist in the figures due to the master meter and the utility customer meter having different billing periods. Typical causes of unaccounted water volumes are:

- ◆ Flushing of mains, especially during construction phases
- ◆ System leaks
- ◆ Inaccurate metering
- ◆ Unauthorized water use (unmetered)
- ◆ Fire fighting

The ULRMWD obtains all of its water from surface water contracted from the Brazos River Authority. The water is tested on a regular basis in accordance with Environmental Protection Agency (EPA) guidelines.

1.4.3 Wastewater Collection and Treatment System

The ULRMWD owns and maintains a package 60,000 GPD wastewater facility which serves the Par Village area near Lake Proctor. The wastewater is collected by a network of sewer lines,

and pumped to the facility by five lift stations. The plant currently has adequate capacity to serve the area through the next twenty years.

1.4.4 System Problems

The ULRMWD currently has no water supply problems. Recent improvements in storage and pumping capacity have increased the ULRMWD's ability to provide adequate peak and average water supply to all users within the system. The ULRMWD has not experienced any major system failures, nor do seasonal increases in demand result in undue pressure drops in the system.

1.5 Goal

Through the measures outlined in this water conservation plan, ULRMWD hopes to achieve a reduction in water uses of at least 5 percent.

1.6 Water Conservation Methods

Water conservation may be achieved through the management or control of the supply of water to the consumer and regulation of the demand for water by that consumer. Supply management methods include minimization of losses from the system by repair of leaks, meter testing and repair, pressure regulation, evaporation suppression, and reuse and watershed management.

The detection and repair of leaks is a significant portion of supply management. An ongoing program to locate defective hydrants and valves, illegal taps, and leaks in mains and service is a prime responsibility of ULRMWD personnel.

Pressure regulation also affects water use. Excessive pressure can lead to the production of leaks in weak links of the water system. The areas prone to the effects of high pressure range from faulty valves and pipe joints to pipe failures.

The testing and repair of water meters in an established program can reduce the amount of water cost. Repair and/or replacement of faulty meters generated along with metering of unmetered taps also provides the opportunity to generate additional revenue without an increase in actual consumption. The ULRMWD currently responds to complaints regarding unusual meter reading but does not test meters in a structured program or schedule. The ULRMWD will adopt a schedule of meter testing as proposed in this Water Conservation Plan.

Watershed management is currently exercised by the Brazos River Authority and the ULRMWD.

Demand management methods provide the means to control the volume of water use by the consumer. The primary tools for demand management use pricing of the water, regulations promoting water saving practices and devices, and education of the public about water conservation methods.

Pricing or the cost of water to the consumer is promulgated by the implementation of a rate structure. A rate structure intended to promote conservation can be in the form of an increasing rate structure. The most common form of increasing rate structure schedules cost per 1000 gallons of water increases in steps at predetermined increments.

The 72nd Texas legislature has enacted a law (S.B. 587) which requires performance standards for plumbing fixtures to take effect on January 1, 1992. The legislature has adopted the standards established by the American National Standards Institute (ANSI) or the following, whichever is more stringent:

- ◆ faucets may not exceed 2.2 gallons per minute (GPM) at a pressure of 60 pounds per square inch (PSI).
- ◆ shower head maximum flow may not exceed 2.75 GPM at a pressure of 80 PSI.
- ◆ urinal flow may not exceed 1.6 gallons per flush except wall-mounted toilets with a flushometer or flush valve may not exceed 2 gallons per flush.
- ◆ drinking fountains must be self-closing.

By March 1, 1993, approved fixtures will be marked on the packaging as approved for sale by the state of Texas. A complete version of S.B. 587 can be found in Appendix E.

These standards represent readily available products and technology and do not involve additional costs when compared to "standard" fixtures. For example, conventional toilets using 1.5 gallons per flush are available at list prices that range from approximately \$50 to \$150 each. Insulated hot water lines decrease water wasted by reducing the amount of time it takes to receive hot water at the tap. Water lines can be insulated for approximately \$.50 per linear foot. In addition, new swimming pools should contain recirculating filtration and disinfection equipment to eliminate the need to fill and drain the pool daily.

Education of the public about water conservation methods and devices is an essential part of a demand management program. Water saving methods that can be practiced by the individual users are listed in Appendix A. Information can be provided to the consumer through newspaper articles in the local papers and through flyers sent with the utility bills.

A district or utility should 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 satisfying existing fixtures or appliances should also be provided. A district or utility may wish to provide certain devices (toilet dams, low-flow shower heads, faucet aerators, etc.) free or at a reduced cost to its customers.

Water saving landscaping can also reduce demand. Annual in-home water use accounts for an average of 65 percent of total residential use, while the remaining 35 percent is used for exterior residential purposes, such as lawn watering and car washing. However, during the summer months, as much as 50 percent of the water used in urban areas is applied to lawns and gardens and adds greatly to the peak demands experienced by most water utilities. In order to reduce the demands placed on a water system by landscape watering, the city or utility 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. Some methods that should be considered include the following:

- ◆ Establishing platting regulations for new subdivisions that require developers, contractors, or homeowners to use only adapted, low water using plants and grasses for landscaping new homes.
- ◆ Initiating a Xeriscape or Texscape program that demonstrates the use of adapted, low water using plants and grasses.
- ◆ Encouraging or requiring landscape architects to use adapted, low water using plants and grasses and efficient irrigation systems in preparing all site and facility plans.
- ◆ Encouraging or requiring licensed irrigation contractors to always use drip irrigation systems when possible and to design all irrigation systems with water conservation features such as sprinklers that emit large drops rather than a fine mist, and a sprinkler layout that accommodates prevailing wind directions.
- ◆ Encouraging or requiring commercial establishments to use drip irrigation for landscape watering when possible and to install only ornamental fountains that recycle and use the minimum amount of water.
- ◆ Encouraging or requiring nurseries and local businesses to offer adapted, low water using plants and grasses and efficient landscape watering devices, such as drip irrigation systems.

SECTION 2.0
WATER CONSERVATION PLAN

2.0 WATER CONSERVATION PLAN

The following elements have been selected as those best suited to the needs of the ULRMWD for water conservation:

- ◆ Demand Management
 - Conservation oriented rate structure
 - Public education and information
 - Water conserving plumbing codes for new construction
 - Retrofit programs

- ◆ Supply Management
 - Universal metering
 - Leak detection and repair

The goal of this water conservation plan is a reduction of five percent in the consumption of water per connection to the system.

2.1 Conservation Oriented Rate Structure

The District currently has a decreasing block rate structure, and is considering the implementation of an increasing block rate structure to be implemented when trigger conditions for a drought emergency exist.

2.2 Public Education and Information

A program of public education and information to promote water conservation by the public will be instituted. The program will include the following:

- ◆ Distribution of educational material to all customers will be made twice during the first year of the program and once per year thereafter. The distribution will be timed to correspond with the peak summer and winter demand periods. The initial distribution will include material describing the new conservation programs and will inform the customers that a drought contingency ordinance has been established to manage use during water emergencies.
- ◆ New customers will be provided with information describing the ULRMWD's water conservation and drought contingency programs when they apply for service.
- ◆ Regular articles will be published in the local paper at times corresponding to the distribution mentioned above and more often if conditions warrant.
- ◆ The initial newspaper article will contain information similar to the initial mailed information describing the programs.

The program will cover the water saving methods listed in Appendix A "Water Saving Methods". The ULRMWD will put special emphasis on the need to insulate pipes to prevent freezing in cold weather and retrofitting.

The energy savings associated with a water conservation program will also be emphasized.

Assistance in obtaining publications and materials for the program will be obtained from:

Texas Water Development Board
P.O. Box 13231, Capitol Station
Austin, Texas 78711-3231

2.3 Water Conserving Plumbing Code

The 72nd Texas legislature has enacted a law (S.B. 587) which requires performance standards for plumbing fixtures to take effect on January 1, 1992. The legislature has adopted the standards established by the American National Standards Institute (ANSI) or the following, whichever is more stringent:

- ◆ faucets may not exceed 2.2 gallons per minute (GPM) at a pressure of 60 pounds per square inch (PSI).
- ◆ shower head maximum flow may not exceed 2.75 GPM at a pressure of 80 PSI.
- ◆ urinal flow may not exceed 1.6 gallons per flush except wall-mounted toilets with a flushometer or flush valve may not exceed 2 gallons per flush.
- ◆ drinking fountains must be self-closing.

By March 1, 1993, approved fixtures will be marked on the packaging as approved for sale by the state of Texas. A complete version of S.B. 587 can be found in Appendix E.

2.4 Retrofit Programs

The ULRMWD 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 satisfying existing fixtures or appliances will also be provided.

2.5 Universal Metering

The ULRMWD currently meters all water sales from its system. A regular schedule for meter testing will be adopted corresponding to the following schedule:

- ◆ Production (master) meters - test as per contractual agreements
- ◆ Meters larger than 1 inch - test once every two years
- ◆ Meters 1 inch and smaller - test continually

2.6 Leak Detection and Repair

The ULRMWD currently has a leak detection program which will be maintained. The program includes:

- ◆ Monthly water use accounting by the billing computer which identified high water use after the service meters indicating leaks.
- ◆ Visual inspection by utility employees who have a constant watch out for abnormal conditions indicating leaks.
- ◆ An adequate maintenance staff which is available to repair any leaks.

2.7 Recycling and Reuse

At the present time, no organized recycling or reuse activities are being conducted by the ULRMWD. The ULRMWD will re-evaluate reuse options if future conditions justify consideration.

2.8 Implementation/Enforcement

The ULRMWD will enforce the water conservation program for its direct individual customers, and will encourage water conservation by the cities that it supplies. A resolution similar to the resolution provided in Appendix C will be adopted by the ULRMWD implementing the final approved water conservation plan.

The ULRMWD board will select the Administrator of the water conservation program. The Administrator will oversee the implementation and execution of all elements of the program.

2.9 Records

The Administrator will be responsible for overseeing the keeping of adequate records for program verification.

2.10 Contracts With Other Political Subdivisions

As a requirement of this plan, any political subdivision contracting with the ULRMWD for water supplies will be encouraged to implement water conservation measures similar to those required by the ULRMWD. The entity may adopt the applicable provisions of the ULRMWD's approved Water Conservation Plan or adopt a plan approved by the TWDB. A sample city ordinance adopting this plan is included in Appendix D. Future customers served by District facilities funded through the TWDB will be required to adopt water conservation and drought contingency plans.

SECTION 3.0
DROUGHT CONTINGENCY PLAN

3.0 DROUGHT CONTINGENCY PLAN

Drought or a number of other uncontrollable circumstances can disrupt the normal availability of community or utility water supplies. Even though a district may have 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. Some older systems or systems serving rapidly growing areas, may not have the capacity to meet higher than average demands without system failure or other unwanted consequences. System treatment, storage, or distribution failures can also prevent a district or utility with an emergency demand management situation.

The following guidelines pertain to the preparation of drought contingency plans. 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 an emergency exists.

An effective drought contingency plan will need to include the following six elements:

- ◆ Trigger conditions signaling the start of an emergency period;
- ◆ Drought contingency measures;
- ◆ Information and education;
- ◆ Initiation procedures;
- ◆ Termination notification actions; and
- ◆ Means of implementation.

3.1 Trigger Conditions

Trigger conditions are unique for each utility system. As indicated earlier, the ULRMWD contracts with Brazos River Authority (BRA) for surface water. The BRA currently designates Lake Proctor as a local use reservoir, which means that water from the lake is to be used locally

and will not be pumped into the entire BRA system. The BRA has instituted three categories of potential drought severity.

3.1.1 Drought Watch

A "Drought Watch" will be declared when the lake is at or below 50 percent of its total active water supply capacity and reasonable estimates of current annual demands, coupled with inflows and evaporation representative of the drought of record, indicate that the amount of water supply in storage could be reduced during the next succeeding 12 month period to 40 percent or less of its total active water supply capacity.

3.1.2 Drought Warning

A "Drought Warning" will be declared if Lake Proctor is at or below 40 percent of its total active water supply capacity and reasonable estimates of current annual demands, coupled with inflows and evaporation representative of the drought of record, indicate that the amount of water supply in storage could be reduced during the next succeeding 12 month period to 30 percent or less of its total active water supply capacity.

3.1.3 Drought Emergency

A "Drought Emergency" will be declared if the defined local use reservoir is at or below 30 percent of its active water supply capacity, or if the remaining capacity is less than one year's estimated demand.

3.2 **Drought Contingency Measures**

The ULRMWD and its customer cities shall take the following actions:

◆ **Drought Watch Measures**

- Inform public by mail and through the news media that a trigger condition has been reached and that water users should look for ways to reduce water consumption voluntarily.
- Advise the public of the trigger condition situation daily.
- Request water users to insulate pipes rather than allowing water to flow to keep pipe from freezing.

◆ **Drought Warning Measures**

- Continue implementation of all relevant actions in preceding phase.
- Car washing, window washing, and pavement washing should be prohibited except when a bucket is used.
- A mandatory lawn watering schedule shall be implemented, so that customers will be required to limit outside watering to once every four days. A schedule should be published in all area newspapers and broadcast on local radio and television. Watering shall be limited to the hours of 6-10 a.m. and 8-10 p.m.
- The following public water uses, not essential for public health or safety, are prohibited.
 - Street washing
 - Water hydrant flushing
 - Filling pools
 - Golf course watering

◆ Drought Emergency Measures

- Prohibit all outdoor use.
- Require that commercial water uses stop operations.
- Implement a user surcharge of \$4 per 1000 gallons for consumption over the following limits:*

- Single family dwellings - 25,000 gallons/month
- Multi-family dwellings - 23,000 gallons/month/unit (including hotels)
- Trailer parks - 20,000 gallons/month/unit
- Commercial and industrial (other than hotels) depending on meter sizes:

Meter Size

5/8 inch - 25,000 gallons/month

1 inch - 40,000 gallons/month

2 inches - 80,000 gallons/month

*These figures should be adjusted downward as the number of service connections increases.

◆ Priority for water use will be extended in the following order:

- Hospitals, health, and safety uses
- Schools
- Industrial
- Commercial
- Residential
- Recreational

3.3 Exceptions to Mandatory Use Restrictions

Businesses requiring water as a basic function of operation such as nurseries, greenhouses, commercial car washes, laundromats, high pressure water cleaning, etc. may be given consideration for some mandatory restrictions. Permission for intended water use by these businesses must be obtained from the plan Administrator once drought trigger conditions occur.

3.4 Education and Information

The ULRMWD's customers will be provided with information on the provisions of the drought contingency plan in a variety of ways. The education program will include the following:

- ◆ Distribution of educational materials on water conservation will also include flyers on the drought contingency plan. The distributions will be made two times during the first year of the program and once per year thereafter. Distributions will be timed to correspond with the peak summer and winter demand periods.
- ◆ Regular articles will be published in the local paper at times corresponding to the above distributions. The articles will include the provisions of the drought contingency plan.
- ◆ Other media announcements may include posters, public notices, and radio announcements as deemed appropriate by the ULRMWD.

3.5 Initiation and Termination Notification

Once trigger conditions and emergency measures have been established, the public will be informed of the conditions and measures to be taken. The process for notification will include the following:

- ◆ Posting notices of drought conditions;

- ◆ Publishing notices in local newspapers;
- ◆ Notifying local radio stations; and
- ◆ Direct mailing to customers and/or hand deliveries explaining the drought conditions and the necessary measures to be taken.

Termination of the drought measures will take place when the trigger conditions have subsided and an emergency condition no longer exists. The public will be informed of the termination of drought contingency measures in the same manner as the notification of trigger conditions listed above.

3.6 Implementation

The ULRMWD board will select an Administrator of the Drought Contingency Program. The Administrator will be responsible for initiation and termination of the drought contingency measures. The Administrator will be authorized by the adoption ordinance to legally impose mandatory use restrictions when a trigger condition is reached. The Administrator will also be responsible for the specific written procedures followed by his office to implement the contingency plan.

The rules adopted under the drought contingency plan also contain enforcement procedures and penalties for non-compliance with mandatory restrictions.

3.7 Relationship With Other Political Subdivisions

As a requirement of this plan, any political subdivision contracting with the ULRMWD for wastewater treatment services will be encouraged to either adopt the ULRMWD's Drought Contingency Plan or adopt a plan approved by the TWDB.

As mentioned previously, ULRMWD provides wastewater treatment to the cities of Comanche, DeLeon, Dublin, Gorman, Proctor, and Hamilton, as well as some of the outlying

unincorporated areas. Water conservation and drought contingency measures may be enacted within these cities on an individual basis by the appropriate city authorities. The ULRMWD has the authority under Section 17.125(e) of the Texas Water Code to require that the cities or other political subdivisions adopt water conservation programs as specified by the ULRMWD in the purchase contract. A sample city ordinance has been included in Appendix D.

APPENDIX A
INDIVIDUAL WATER SAVING PRACTICES

APPENDIX A
INDIVIDUAL WATER SAVING PRACTICES

In the bathroom, customers should be encouraged to:

Take a shower instead of filling the tub and taking a bath. Showers usually use less water than tub baths.

Install a low-flow shower head which restricts the quantity of flow at 60 psi to no more than 2.75 gallons per minute.

Take short showers and install a cutoff valve or turn the water off while soaping and back on again only to rinse.

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.

Reduce the level of the water used in a bath tub by one or two inches if a shower is not available.

Turn water off when brushing teeth until it is time to rinse.

Not let the 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.

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.

Hold hot water in the basin when shaving instead of letting the faucet continue to run.

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.

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 will provide enough for flushing. (Bricks, which some people use for this purpose, are not recommended since they eventually crumble and could damage the working mechanism, necessitating a call to the plumber). Displacement devices should never be used with new low-volume flush toilets.

Install faucet aerators to reduce water consumption.

Never use the toilet to dispose of cleansing tissues, cigarette butts, or other trash. This can waste a great deal of water and also places an unnecessary load on the sewage treatment plant or septic tank.

Install a new low-volume flush toilet that uses 1.6 gallons or less per flush when building a new home or remodeling a bathroom.

In the kitchen, customers should be encouraged to:

Use a pan of water (or place a stopper in the sink) for rinsing pots, pans, and cooking implements when cooking rather than turning on the water faucet each time a rinse is needed.

Never run the dishwasher without a full load. In addition to saving water, expensive detergent will last longer and a significant energy savings will appear on the utility bill.

Use the sink disposal sparingly and never use it for just a few scraps.

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.

Use a small pan of cold water when cleaning vegetables rather than letting the faucet run.

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.

Use a pan of water for rinsing when hand washing dishes rather than running the faucet.

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 in a year's time.

In the laundry, customers should be encouraged to:

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

Use the lower water level setting on the washing machine for light loads, whenever possible.

Use cold water as often as possible to save energy and to conserve the hot water for uses cold water cannot serve. (This is also better for clothing made of today's synthetic fabrics).

For appliance and plumbing, the customer should be encouraged to:

Check water requirements of various models and brands when considering purchasing any new appliance that uses water. Some use less water than others.

Check all water line connections and faucets for leaks. If the cost of water is \$1.00 per 1000 gallons, one could be paying a large bill for water that simply goes down the drain because of leakage. A slow drip can waste as much as 170 gallons of water each day, or 5000 gallons per month, and can add as much as \$5.00 per month to the water bill.

Learn to replace faucet 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.

Check the water leakage that the customer may be entirely 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.

Insulate all hot water pipes to avoid delays (and wasted water) experienced while waiting for the water to "run hot".

Be sure that 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.

Use a moisture meter to determine when house plants need water. More plants die from over-watering than from being on the dry side.

For out-of-doors use, customers should be encouraged to:

Water lawns only in the morning during the hotter summer months. Much of the water used in the lawn can simply evaporate between the sprinkler and the grass.

Use a sprinkler that produces large drops of water, rather than a fine mist, to avoid evaporation.

Turn soaker hoses so the holes are on the bottom to avoid evaporation.

Water slowly for better absorption and never water on windy days.

Forget about watering the streets, walks, or driveways. They will never grow a thing. Condition the soil with compost before planting grass or flower beds so the water will soak in rather than runoff.

Fertilize lawns at least twice a year for root stimulation. Grass with a good root system makes better use of less water.

Learn to know when grass needs watering. If it has turned a dull grey-green or if footprints remain visible, it is time to water.

Do not water too frequently. Too much water can overload the soil so that air cannot get to the roots and can encourage plant disease.

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.

Operate automatic sprinkler systems only when the demand on the town's water supply is lowest. Set the system to operate between four and six a.m.

Do not scalp lawns when mowing during hot weather. Taller grass holds moisture better. Rather, grass should be cut fairly often, so that only 1/2 to 3/4 inch is trimmed off. A better looking lawn will result.

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.

Consider decorating areas of the lawn with rocks, gravel, wood chips, or other materials now available that require no water at all.

Do not "sweep" walks and driveways with the hose. Use a broom or rake instead.

Use a bucket of soapy water and use the hose only for rinsing when washing the car.

APPENDIX B
ADDITIONAL WATER SAVING METHODS

Table 1. Examples of Methods Used to Implement Water Use Efficiency Practices

Education and Information	Economic and Price	Regulatory
<p>1. Setting a good public example.</p> <p>2. Using radio and TV public service announcements.</p> <p>3. Teaching about water resources in public schools.</p> <p>4. Using TV, newspaper, and radio to disseminate information.</p> <p>5. Providing bill "stuffers" and brochures.</p> <p>6. Conducting public meetings and seminars.</p> <p>7. Setting up an information "hot line."</p> <p>8. Inviting public input.</p> <p>9. Providing information on water saving appliances and plumbing fixtures.</p> <p>10. Setting up demonstration projects.</p>	<p>1. Providing low interest loans or grants to install water saving irrigation equipment.</p> <p>2. Sending out free shower heads and toilet dams to customers.</p> <p>3. Providing coupons for discounts on water saving devices.</p> <p>4. Giving tax breaks to those who modify agricultural or industrial practices.</p> <p>5. Giving breaks on water rates for those who save.</p> <p>6. Using increasing block rate structures.</p> <p>7. Assessing tax or price increases on those who fail to save.</p> <p>8. Assessing fines.</p> <p>9. Providing free customer assistance and conservation device installation.</p>	<p>1. Instituting plumbing codes requiring that water saving fixtures be used.</p> <p>2. Passing laws which fine or penalize water wasters.</p> <p>3. Requiring industries and irrigators to use water efficient equipment.</p> <p>4. Restricting the sale of equipment that wastes water.</p> <p>5. Requiring the use of certain water saving plants or grasses or restrict the sale of water wasting plants by nurseries.</p>

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Table 2. Examples of Structural Techniques that Increase Water Use Efficiency

Municipal and Commercial	Industrial	Agricultural
1. Repairing water distribution leaks and meters.	1. Employing recirculation of water in the plant.	1. Lining canals and repairing transmission systems.
2. Retrofitting toilets, faucets, and showers with dams, (or similar devices), aerators, and low flow shower heads, respectively.	2. Using air cooling.	2. Controlling phreatophytes.
3. Installing low-flush or dual-flush toilets.	3. Modifying the plant's production process.	3. Installing water control structures.
4. Insulating hot water pipes.	4. Repairing leaks.	4. Using furrow dikes.
5. Repairing leaks.	5. Repairing steam traps.	5. Using drip or improved LEPA irrigation systems.
6. Using water efficient appliances.	6. Practicing energy conservation.	6. Recovering tailwater.
7. Installing drip or efficient lawn watering equipment.	7. Replacing high water use processes with new process technologies that use less water.	7. Installing moisture measuring devices.
8. Using low water using and drought resistance plants and grass.	8. Using low water use fixtures in office facilities.	8. Contouring land or using levees.
9. Using moisture sensing controls to determine the need to water the lawn.	9. Using drip or water efficient landscape watering equipment,	9. Consolidating canal systems.
10. Using pressure reduction.	10. Using low water using and drought resistant plants and grass.	10. Applying watershed management.
11. Practicing water harvesting.	11. Installing moisture sensing controls.	
12. Installing water meters.		

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Table 3. Examples of Behavioral Changes that Increase Water Use Efficiency

Municipal and Commercial	Industrial	Agricultural
<ol style="list-style-type: none"> 1. Taking shorter showers. 2. Turning off water when brushing teeth. 3. Washing only full loads in dish and clothes washers. 4. Using a broom to clean driveway instead of waterhose. 5. Using lawn watering equipment carefully. 6. Maintaining a high level of water conservation awareness. 7. Scheduling lawn watering. 8. Washing the car with a bucket and hose with a shutoff valve. 9. Demanding good conservation practices by utility and governmental authorities. 	<ol style="list-style-type: none"> 1. Minimizing the use of hosedown practices for the work area. 2. Instructing employees on water saving practices. 3. Employing the same practices as commercial operations in the office area. 4. Setting good community examples and aiding in water resource information dissemination. 	<ol style="list-style-type: none"> 1. Practicing irrigation scheduling. 2. Practicing improved tillage. 3. Practicing periodic deep plowing. 4. Mulching. 5. Employing system efficiency evaluation. 6. Maintaining irrigation equipment.

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Table 4. Water Conserving Retrofit Devices

Application	Device	Function	Water Savings	Estimated Unit Water Savings : gpcd	Estimated Cost : \$	Service Life : Years
Toilet	Two displacement bottles	Reduces flush volume	0.5 gal/flush	2.3	0-0.20	5
Toilet	Water closet dam	Reduces flush volume	1.0 gal/flush	4.5	1.50-3.00	5
Toilet	Dual-flush	Variable-flush volume	3.5 gal/flush	15.7	15.00	15
Shower	Flow restrictor	Limits flow to 3 gpm	1.5 gpm	6.7	0.50	5
Shower	Reduce-flow shower head	Limits flow to 3 gpm	1.5 gpm	6.7	3.00-20.00	15
Shower	Reduce-flow shower head with cutoff valve	Limits flow to 2.5 gpm	2 gpm	8.0	5.00-20.00	15
Shower	Cutoff valve	Facilitates "navy" shower"	-	-	2.50-5.00	15
Faucets	Aerator	Reduces splashing, enhances flow aesthetics, creates appearance of greater flow	-	0.5	0.50-2.00	15
Hot water pipes	Insulation	Reduces warm-up time	-	0.5	0.50/ft	25
Water hook-up	Pressure-reducing valve	Reduces available water pressure at fixtures and, hence, flow rate	-	3.0	85.00	25

gpcd = gallons per capita per day; gpm = gallons per minute

Table 5. Water Conserving Devices for New Construction

Application	Device	Function	Water Savings	Estimated Unit Water Savings : gpcd	Estimated Additional Cost : \$	Estimated Service Life : Years
Toilet	Low-flush, 3.5 gal/flush	Reduced flush volume	1.5 gal/flush	7.5	0	25
Toilet	Low-flush, 2.5 gal/flush	Reduced flush volume	2.5 gal/flush	12.5	0	25
Toilet	Low-flush, 1.0 gal/flush	Reduced flush volume	4.0 gal/flush	20.0	*	25
Shower	Reduced-flow shower head	Reduces shower flow rate to 3.0 gpm	1.5 gpm	6.7	0	15
Shower	Reduced-flow shower head with cutoff valve	Reduces shower flow rate to 2.5 gpm	2.0 gpm	8.0	0	15
Shower	Cutoff valve	Facilitates "navy shower"	-	-	2.50-5.00	15
Faucet	Aerator	Reduces splashing, enhances flow aesthetics, creates appearance of greater flow	-	0.5	0.50-2.00	15
Water hook-up	Pressure-reducing valve	Reduces available water pressure at fixtures and, hence, flow rate	-	3.0	45.00	25
Appliances	Water-efficient dish-washing appliances	Reduced water requirement	6-gal/cycle	2.0	0	15
Appliances	Water-efficient clothes-washing machine	Reduced water requirement	14-gal/cycle	3.5-7.0	70.00	15

*Some are expensive, but others are available at costs comparable to 3.5 gallon per flush models.

Table 6. Estimated Energy Savings Associated with Residential Water Conservation

Device	Hot Water Saved ^{a/} (Gal/day/D.U.) ^{b/}	Amount of Energy Saved		Value of Energy Saved	
		Gas Water Heaters ^{c/} (Therms/year/D.U.) ^{d/}	Electric Water ^{e/} (Kw-hr/year/D.U.)	Gas ^{f/}	Electric ^{g/}
Showerhead, 3.0 gpm	8.0	22.9	541	12.6	32.4
Water saving dishwashers	4.7	13.6	320	7.5	19.2
Water saving clothes-washing machines	2.4	6.8	160	3.7	9.6
Subtotal	15.1	43.3	1,021	23.8	61.2
Insulation of hot water pipes	4.7	13.6	320	7.5	19.2
Total	19.8	56.9	1,341	31.3	80.4

a/ 140° F water saved as follows: shower 3.4 gallons per capita per day (gpcd); dishwasher 2.0 gpcd; washing machines 1.0 gpcd; thermal pipe insulation 2.0 gpcd.

b/ D.U.= dwelling units; 2.37 persons per dwelling unit.

c/ 79 percent efficiency. Source: The California Appliance Efficiency Program - Revised Staff Rept. California Energy Resources Conservation & Devel. Comm. Conservation Div. (Nov. 1977).

d/ One Therm = 100,000 BTU.

e/ 98 percent efficiency. Source: ibid.

f/ \$0.55/therm.

g/ \$0.06/kw-hr.

APPENDIX C
RESOLUTION BY ULRMWD BOARD ADOPTING
WATER CONSERVATION PLAN AND DROUGHT CONTINGENCY PLAN

A RESOLUTION ADOPTING AN UPPER LEON RIVER MUNICIPAL WATER DISTRICT WATER CONSERVATION PLAN AND DROUGHT CONTINGENCY PLAN; PROVIDING A PENALTY OF NOT LESS THAN \$10.00 PER DAY NOR MORE THAN \$200.00 PER DAY FOR EACH DAY OF NONCOMPLIANCE WITH THE PROVISIONS THEREOF; PROVIDING FOR PUBLICATION AND RESOLVING OTHER MATTERS RELATED TO THE FOREGOING.

THE STATE OF TEXAS §

COUNTY OF COMANCHE §

UPPER LEON RIVER
MUNICIPAL WATER DISTRICT §

BE IT RESOLVED BY THE BOARD OF DIRECTORS OF UPPER LEON RIVER MUNICIPAL WATER DISTRICT:

SECTION I: Approval of the Plan: The Board of Directors hereby approves and adopts as the ULRMWD's Water Conservation Plan the Water Conservation/Drought Contingency Plan attached hereto to be included in full as a part of this Ordinance as if recited verbatim herein. The ULRMWD commits to implement the program according to procedures set forth in the adopted plan.

SECTION II: The ULRMWD shall report to the Texas Water Development Board annually on the implementation and effectiveness of the plan in accordance with the outline set forth in the plan.

SECTION III: In regards to implementation and enforcement of the Conservation and Drought Contingency Plan the President is designated as the official responsible for implementation and enforcement.

SECTION IV: Users of district water except for the ULRMWD, that do not comply with this Resolution shall be subject to a penalty and fine of not less than \$10.00 per day nor more than \$200.00 per day for each day of noncompliance and/or disconnection or discontinuance of water services to such users by the ULRMWD.

SECTION V: The Board finds and declares that a sufficient written notice of the date, hour, place and subject of this meeting of the Board was posted at a designated place convenient to the public at the ULRMWD Office for the time required by law preceding this meeting and that such place of posting was readily accessible at all times to the general public; that all of the foregoing was done as required by law; and that this meeting has been open to the public as required by law at all times during which this Resolution and the subject matter thereof has been discussed, considered and formally acted upon.

PASSED AND APPROVED THIS _____ DAY OF _____, 199_.

UPPER LEON RIVER
MUNICIPAL WATER DISTRICT

BY: _____

ATTEST:

APPENDIX D
SAMPLE CITY ORDINANCE ADOPTING THE ULRMWD
WATER CONSERVATION PLAN AND DROUGHT CONTINGENCY PLAN

ORDINANCE NO. _____

A RESOLUTION ADOPTING A CITY OF _____ WATER CONSERVATION PLAN AND DROUGHT CONTINGENCY PLAN; PROVIDING A PENALTY OF NOT LESS THAN \$10.00 PER DAY NOR MORE THAN \$200.00 PER DAY FOR EACH DAY OF NONCOMPLIANCE WITH THE PROVISIONS THEREOF; PROVIDING FOR PUBLICATION AND RESOLVING OTHER MATTERS RELATED TO THE FOREGOING.

THE STATE OF TEXAS §

COUNTY OF _____ §

UPPER LEON RIVER
MUNICIPAL WATER DISTRICT §

BE IT ORDAINED BY THE CITY OF _____ :

SECTION I: Approval of the Plan: The City Council hereby approves and adopts as the City's Water Conservation Plan the Water Conservation/Drought Contingency Plan attached hereto to be included in full as a part of this Ordinance as if recited verbatim herein. The City commits to implement the program according to procedures set forth in the adopted plan.

SECTION II: The City shall report to the Texas Water Development Board annually on the implementation and effectiveness of the plan in accordance with the outline set forth in the plan.

SECTION III: In regards to implementation and enforcement of the Conservation and Drought Contingency Plan, the City Manager is designated as the official responsible for implementation and enforcement.

SECTION IV: Users of City water except for the City, that do not comply with this Resolution shall be subject to a penalty and fine of not less than \$10.00 per day nor more than \$200.00 per day for each day of noncompliance and/or disconnection or discontinuance of water services to such users by the City.

SECTION V: The City Council finds and declares that a sufficient written notice of the date, hour, place and subject of this meeting of the Council was posted at a designated place convenient to the public at the City Hall for the time required by law preceding this meeting and that such place of posting was readily accessible at all times to the general public; that all of the foregoing was done as required by law; and that this meeting has been open to the public as required by law at all times during which this Resolution and the subject matter thereof has been discussed, considered and formally acted upon.

PASSED AND APPROVED THIS _____ DAY OF _____, 199_.

MAYOR _____

CITY SECRETARY _____

APPENDIX E
SENATE BILL 587 OF THE 72ND LEGISLATURE
STANDARDS FOR PLUMBING FIXTURES

AN ACT

relating to performance standards for certain plumbing fixtures and related labeling requirements for certain plumbing fixtures and appliances; creating offenses and providing civil and administrative penalties.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF TEXAS:

SECTION 1. The purpose of this Act is to establish water saving performance standards for sink and lavatory faucets, shower heads, drinking water fountains, urinals, toilets, and flush valve toilets that are manufactured, imported, or otherwise supplied for sale in the state and to establish labeling requirements for clothes-washing and dish-washing machines and lawn sprinklers to supply a consumer with information concerning water usage to assist the consumer in making an informed purchasing decision. It is the intent of the legislature that the requirements of this Act be enforced primarily against manufacturers, importers, and major suppliers of plumbing fixtures.

SECTION 2. Title 5, Health and Safety Code, is amended by adding Subtitle E to read as follows:

SUBTITLE E. WATER USE REGULATION

CHAPTER 421. WATER SAVING PERFORMANCE STANDARDS

Sec. 421.001. DEFINITIONS. In this chapter:

(1) "Board" means the Texas Board of Health.

(2) "Commissioner" means the commissioner of health.

(3) "Department" means the Texas Department of Health.

(4) "Plumbing fixture" means a sink faucet, lavatory faucet, faucet aerator, shower head, urinal, toilet, flush valve toilet, or drinking water fountain.

(5) "Toilet" means a toilet or water closet except a wall-mounted toilet that employs a flushometer or flush valve.

Sec. 421.002. WATER SAVING PERFORMANCE STANDARDS. (a) A person may not sell, offer for sale, distribute, or import into this state a plumbing fixture for use in this state unless:

(1) the plumbing fixture meets the water saving performance standards provided by Subsection (b); and

(2) the plumbing fixture is listed by the department under Subsection (c).

(b) The water saving performance standards for a plumbing fixture are those established by the American National Standards Institute or the following standards, whichever are more restrictive:

(1) for a sink or lavatory faucet or a faucet aerator, maximum flow may not exceed 2.2 gallons of water per minute at a pressure of 60 pounds per square inch when tested according to testing procedures adopted by the board;

(2) for a shower head, maximum flow may not exceed 2.75 gallons of water per minute at a constant pressure over 80 pounds per square inch when tested according to testing procedures adopted by the board;

(3) for a urinal and the associated flush valve, if any, maximum flow may not exceed an average of one gallon of water per flushing when tested according to the hydraulic performance requirements adopted by the board;

(4) for a toilet, maximum flow may not exceed an average of 1.6 gallons of water per flushing when tested according to the hydraulic performance requirements adopted by the board;

(5) for a wall-mounted toilet that employs a flushometer or flush valve, maximum flow may not exceed an average of two gallons of water per flushing or the flow rate established by the American National Standards Institute for ultra-low flush toilets, whichever is lower; and

(6) a drinking water fountain must be self-closing.

(c) The board shall make and maintain a current list of plumbing fixtures that are certified to the board by the manufacturer or importer to meet the water saving performance standards established by Subsection (b). To have a plumbing fixture included on the list, a manufacturer or importer must supply to the department, in the form prescribed by the department, the identification and the performance specifications of the plumbing fixture. The department may test a listed fixture to determine the accuracy of the manufacturer's or importer's certification and shall remove from the list a fixture the board finds to be inaccurately certified.

(d) The department may assess against a manufacturer or an

1 importer a reasonable fee for an inspection of a product to
2 determine the accuracy of the manufacturer's or importer's
3 certification in an amount determined by the board to cover the
4 expenses incurred in the administration of this chapter. A fee
5 received by the department under this subsection shall be deposited
6 in the state treasury to the credit of the department and may be
7 used only for the administration of this chapter.

8 (e) The board and the department shall, to the extent
9 appropriate and practical, employ the standards designated American
10 National Standards by the American National Standards Institute in
11 determining or evaluating performance standards or testing
12 procedures under this chapter.

13 (f) This section does not apply to:

14 (1) a plumbing fixture that has been ordered by or is
15 in the inventory of a building contractor or a wholesaler or
16 retailer of plumbing fixtures on January 1, 1992;

17 (2) a fixture, such as a safety shower or aspirator
18 faucet, that, because of the fixture's specialized function, cannot
19 meet the standards provided by this section;

20 (3) a fixture originally installed before January 1,
21 1992, that is removed and reinstalled in the same building on or
22 after that date; or

23 (4) a fixture imported only for use at the importer's
24 domicile.

25 Sec. 421.003. LABELING REQUIREMENTS. (a) A person may not

1 sell, offer for sale, distribute, or import into this state a
2 plumbing fixture unless the plumbing fixture, including each
3 component of a toilet, flush valve toilet, or urinal, and the
4 associated packaging are marked and labeled in accordance with the
5 rules adopted by the board.

6 (b) The board shall adopt rules for the marking or labeling
7 of plumbing fixtures. The rules must require information
8 concerning water-saving measures to be included in required marks
9 or labels. In developing marking or labeling requirements, the
10 board shall consider the technological and economical feasibility
11 of a mark or label.

12 (c) The board by rule shall prohibit the sale, offering for
13 sale, distribution, or importation into this state of a new
14 commercial or residential clothes-washing machine, dish-washing
15 machine, or lawn sprinkler unless:

16 (1) the manufacturer has furnished to the department,
17 in the form prescribed by the department, the identification and
18 performance specifications of the device; and

19 (2) the clothes-washing or dish-washing machine or
20 lawn sprinkler is labeled in accordance with rules adopted by the
21 board with a statement that describes the device's water use
22 characteristics.

23 (d) Rules adopted or amended under this section shall be
24 developed by the board in conjunction with a technical advisory
25 panel of designated representatives of the Texas Water Development

1 Board, the Texas Water Commission, the Texas State Board of
2 Plumbing Examiners, and the department.

3 (e) This section shall not apply to those clothes-washing or
4 dish-washing machines that are subject to and in compliance with
5 the labeling requirements of the National Appliance Energy
6 Conservation Act of 1987, Public Law 100-12.

7 Sec. 421.004. ADMINISTRATIVE PENALTY. (a) A person who
8 violates this chapter or a rule adopted under this chapter shall be
9 assessed an administrative penalty in an amount not to exceed
10 \$5,000 for each violation and for each day of a continuing
11 violation.

12 (b) A person against whom an administrative penalty is
13 assessed is entitled to notice and a hearing on the assessment of
14 the penalty, as provided by rule of the board.

15 (c) Not later than the 30th day after the date on which the
16 commissioner's order assessing the administrative penalty is final,
17 the person assessed shall pay the full amount of the penalty or
18 file a petition for judicial review. If the person seeks judicial
19 review, the person shall send the amount of the penalty to the
20 commissioner for placement in escrow or post with the commissioner
21 a bond in a form approved by the commissioner for the amount of the
22 penalty, the bond to be effective until judicial review of the
23 order is final. A person who fails to comply with this subsection
24 waives judicial review.

25 (d) The commissioner may request enforcement by the attorney

general if the person assessed the penalty fails to comply with this section.

(e) Judicial review of the order assessing the penalty is under Section 19, Administrative Procedure and Texas Register Act (Article 6252-13a, Vernon's Texas Civil Statutes).

(f) An administrative penalty collected under this section shall be deposited in the state treasury to the credit of the general revenue fund.

Sec. 421.005. CIVIL PENALTY; INJUNCTION. (a) A person who violates this chapter or a rule adopted under this chapter is subject to a civil penalty not to exceed \$5,000 for each violation and each day of a continuing violation.

(b) If it appears that a person has violated, is violating, or is threatening to violate this chapter or a rule adopted under this chapter, the department, a county, or a municipality may bring a civil action in a district court in Travis County, the county in which the defendant resides, or the county where the violation occurred, is occurring, or is threatened for:

(1) injunctive relief to restrain the person from continuing the violation or threat of violation;

(2) the assessment of a civil penalty for a violation;
or

(3) both injunctive relief and a civil penalty.

(c) The department is an indispensable party in a suit brought by a county or municipality under this section.

1 (d) A district court shall grant injunctive relief, assess a
2 civil penalty, or both, as warranted by the facts, if the court
3 finds that the person has violated or is violating this chapter or
4 a rule adopted under this chapter.

5 (e) In a suit to enjoin a violation of this chapter or a
6 rule adopted under this chapter, the court shall grant the state,
7 department, county, or municipality, without bond or other
8 undertaking, any injunction that the facts warrant, including a
9 temporary restraining order, temporary injunction, or permanent
10 injunction.

11 (f) A civil penalty recovered in a suit brought by a county
12 or municipality under this section shall be divided equally between
13 the state and the county or municipality that first brought the
14 suit. The state's share of any civil penalty shall be deposited in
15 the state treasury to the credit of the general revenue fund.

16 (g) At the request of the department, the attorney general
17 shall bring and conduct a suit in the name of the state for
18 injunctive relief, to recover a civil penalty, or both.

19 SECTION 3. (a) The Texas Board of Health shall adopt rules
20 necessary to implement the water saving performance standards
21 established by Chapter 421, Health and Safety Code, as added by
22 this Act, to take effect on January 1, 1992.

23 (b) The Texas Board of Health shall propose, on or before
24 September 1, 1992, rules necessary to implement the labeling
25 requirements as provided by Chapter 421, Health and Safety Code, as

1 added by this Act, and shall adopt rules necessary to implement the
2 labeling requirements as provided by that chapter to take effect on
3 March 1, 1993.

4 SECTION 4. (a) Except as provided by Subsections (b) and
5 (c) of this section, this Act takes effect September 1, 1991.

6 (b) Subsection (a), Section 421.002, Health and Safety Code,
7 as added by this Act, takes effect January 1, 1992.

8 (c) Subsections (a) and (b), Section 421.003, Health and
9 Safety Code, as added by this Act, take effect March 1, 1993.

10 SECTION 5. The importance of this legislation and the
11 crowded condition of the calendars in both houses create an
12 emergency and an imperative public necessity that the
13 constitutional rule requiring bills to be read on three several
14 days in each house be suspended, and this rule is hereby suspended.

President of the Senate

Speaker of the House

I hereby certify that S.B. No. 587 passed the Senate on April 4, 1991, by a viva-voce vote; and that the Senate concurred in House amendments on May 27, 1991, by a viva-voce vote.

Secretary of the Senate

I hereby certify that S.B. No. 587 passed the House, with amendments, on May 24, 1991, by a non-record vote.

Chief Clerk of the House

Approved:

Date

Governor