

## RESOLUTION 2014-001

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE EAST CEDAR CREEK FRESH WATER SUPPLY DISTRICT ADOPTING A WATER CONSERVATION/DROUGHT CONTINGENCY PLAN.

WHEREAS, the board recognizes that the amount of water available to the East Cedar Creek and its water utility customers is limited and subject to depletion during periods of extended drought.

WHEREAS, Chapter 363.15 of the Texas Water Development Board Rules for Financial Assistance requires preparation and implementation of the Water Conservation / Drought Contingency Plan for financial assistance of greater than \$500,000

WHEREAS, Section 11.1272 of the Texas Water Code and applicable rules of the Texas Commission on Environment Quality require all public water supply systems in Texas to prepare Conservation / Drought Contingency plan: and

WHEREAS, as authorized under the law, and in the best interests of the customers of East Cedar Creek FWSD, the Board deems it expedient and necessary to establish certain rules and policies for the orderly and efficient management of limited water supplies during drought and other water supply emergencies;

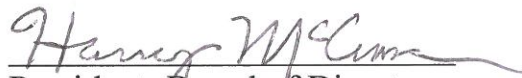
NOW, THEREFORE BE IT RESOLVED by the Board of Directors of East Cedar Creek Fresh Water Supply District;

Section 1. That the Conservation / Drought Contingency Plan approved by resolution 2006-004, amended by resolution 2009-005 be amended and approved by resolution 2014-001 hereto as Exhibit "A" and made part hereto for all purposes be, and the same is hereby, adopted as the official policy of the East Cedar Creek FWSD.

Section 2. That the General Manager is hereby directed to implement, administer, and enforce the Conservation / Drought Contingency Plan.

Section 3. That this resolution shall take effect immediately upon passage.

PASSED AND APPROVED THIS 16th day of April, 2014.

  
President, Board of Directors  
East Cedar Creek Fresh Water Supply District

Attest:

  
Secretary, Board of Directors  
East Cedar Creek Fresh Water Supply District

# **East Cedar Creek Fresh Water Supply District (ECCFWSD)**

**Brookshire PWS: 1070167**

**McKay PWS: 1070019**

**ECCFWSD CCN: 11682**

## **Conservation / Drought Contingency Plan**

Approved by Resolution 2014-001  
April 16, 2014 by ECCFWSD BOD

# **East Cedar Creek FWSD Conservation / Drought Contingency Plan**

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**RETAIL AND WHOLESALE CONSERVATION AND DROUGHT CONTINGENCY PLAN  
FOR  
EAST CEDAR CREEK FRESH WATER SUPPLY DISTRICT  
April 16, 2014**

**Section I: Introduction & Utility Profile**

East Cedar Creek Fresh Water Supply District (ECCFWSD) is a local governmental entity created by the 65<sup>th</sup> Texas Legislature on June 25, 1977. The District's CCN covers approximately 20 square miles in northwest Henderson County, adjacent to the north and east banks of Cedar Creek Reservoir.

**Drinking Water System**

Although the number of customer's accounts change monthly, in 2010 – 11 fiscal year the average customer base for water was 5,550 and 4,700 sewer customers. Much of the District's service area consists of municipal and rural residential subdivisions that were developed in the mid to late 1960s and early 1970s following construction of the reservoir. Prior to 2012-13 ECCFWSD agreed to purchase all of the City of Mabank's water customer accounts and infrastructure. And by the end of 2012-13 all the newly acquired water customers were on the District's water mains increasing the meter accounts from 5,794 to 6,297 which increased the District's water accounts by 8%. ECCFWSD's CCN is limited to growth on three boundary borders; City of Mabank Water Supply, City of Eustace Water Supply, Payne Springs WSC and West Cedar Creek MUD. The CCN average customer base growth rate for the system in the past 5-years, excluding the year that the City of Mabank Annex occurred, has increased by 4%. The expected growth rate for the next 5-years years is anticipated to be 4.5%.. If the 4.5% is applied the district customer base in the next 5-years will increase from the current customer base of 6,340 to 7,532 in 2017. The inclining rate structure in place encourages water conservation and with the average water usage per capita reflecting a lower usage per meter unit than the TCEQ regulatory standard of 0.6-gpm/meter unit the district is able to maintain a TCEQ 0.45-gpm/meter unit variance.

Water supply source for the District's water treatment plant production of potable water comes from the Cedar Creek Lake managed by Tarrant Regional Water District. Raw water allocation is based upon annual averages set fourth within the raw water supply contract. The maximum combined diversion rate is not to exceed 8.91 cubic feet per second (3,999-gpm). The combined amount of raw water diversion for 2010-11 was 375,000,000 gallons.

The McKay Water Treatment Plant (WTP) provides water to customers in the southern portion of the district and the Brookshire WTP services customers in the northern sector. The plant has a water treatment capacity of 1.73 million gallons per day. Two ground storage tanks and elevated water tower provide a treated water storage capacity of 587,000 gallons.

The Brookshire WTP, located off Welch Lane in Gun Barrel City, is more than 20 years old but currently undergoing expansion and upgrades which will provide quality service and capacity for several years to come. The plant is being upgraded from its original design of two million gallons per day (MGD) treatment capacity to four MGD. . A second 2 MGD Clarifier and (2) 1 MGD Filters have been constructed to increase the Filter trains to (4). A second 1,440 GPD Raw Water Pump has been installed which increases the WTP capacity from the original design of 2-MGD to 3.024 MGD treatment capacity. To increase from the 3.024 MGD to the desired 4 MGD the District must replace the last 700 GPM Raw Water Pump assembly with a third 1,440 GPD pump assembly. The target date for this phase by the District's fiscal year of 2016-17. The new two ground storage tanks and elevated water tower provide a treated storage capacity of 1,570,000 gallons.



## **Wastewater System**

East Cedar Creek Fresh Water Supply District (ECCFWSD) operates two wastewater treatment plants (WWTP). The South WWTP is located along the east side of Hwy 198 just north of the entrance to the City of Enchanted Oaks, and serves the southern area of the district. The North WWTP is located in an unincorporated area on Hammer Road, just off Welch Lane in Gun Barrel City and serves the district's northern sector.

The South WWTP is approximately six years old. It is a modern, state-of-the-art plant with a permitted capacity of .200 million gallons per day (MGD). With less than one-third of the plant's capacity in use daily, the plant will serve the southern portion of the district for the long term. The South WWTP sits on a 178-acre tract with 138 acres under effluent water irrigation from the plant. Treated water effluent from the plant is processed to a large holding pond and then into an irrigation system. The residual sludge is processed for disposal to beneficial land use application.

The cutting, baling, and selling of hay from the plant's irrigated acreage creates an average profit of \$8,000 annually. These funds are deposited in the district's general fund account and used to cover other operating expenses in the district.

The North WWTP was built in 1979 and has a treatment capacity of .750 MGD with a surge capacity of 1.3 MGD for a period not to exceed two hours.

## **Section II: Conservation Goals and Objectives**

### **Public Education**

ECCFWSD advocates a positive public education program. All new accounts are provided with a customer packet which promotes conservation and numerous education pamphlets regarding water restricting, saving devices are available in the front lobby. Customer billing concerns are addressed in a manner to encourage conservation. Through best practice management, rate structures and education it is ECCFWSD goal to maintain a water usage ratio to insure that the TCEQ 0.6-gpm per connection variance of 0.45-gpm remains in effect. This TCEQ approved variance in itself demonstrates that ECCFWSD and customers are very concerned about conserving our precious and valuable resource, water. This 0.45 gpm per connection variance represent a 25% overall system reduction of water usage when compared to the TCEQ regulated rule of 0.6 gpm per connection for system minimum design.

During water week the district holds a customer education awareness week and presents to grade school students the importance of conservation and protecting our water resources. On ECCFWSD's web site educational and promotional material are available for the customer education such as district design and capacity information, water rates design for conservation and links to federal and state educational web sites for additional research and reading.

### **Water Usage Accountability**

ECCFWSD has implemented a customer meter change out and meter accuracy program. All customers are metered including ECCFWSD facilities. Meter change-out is determine by three criteria's; 1) Acceptable standards of the meter industry of 20-yr's of age or 1-million gallons, 2) Investigate meter reader records for no usage and or irregular registering of an active account, 3) Customer request for a meter accuracy test, if inaccurate more that 2% meter is changed. Employees maintain monthly records for water flushed, treatment process usage and other such usages which warrant validity.

### **Unaccounted for water**

ECCFWSD is striving to reduce the amount of unaccountable water by conducting water leak surveys, and promoting to our customers the value of reporting suspicious water ponding and small leaks. Infrastructure repairs are targeted toward long-term infrastructure improvements instead of fast repairs. Master meters at the water treatment plants are tested for accuracy. ECCFWSD continues to improve filtration times and repairs leaking valves to prevent the waste of treated water. The annual average unaccounted for water is decreasing due to the programs. The 2003-04 fiscal year records report the annual average water loss as 25%; in 2011-12 the annual average was reduced to 14%. It is the intent of the district to maintain the accepted standard of 15% or less with the aggressive leak repair program, meter change out program and accountability. Addendum: ECCFWSD Annual Water Accountability

To assist in reducing the amount of unaccountable water loss ECCFWSD has implemented an aggressive program to verify to a reasonable degree what can be considered un-billed accountable water such as non-billed water that is metered for district facilities, flushing that is necessary for water quality in the distribution system and calculating the amount of water that was lost during a water leak. The calculation formula for water leak loss accountability is derived from the TWDB assumable lost table which lists approximate flow in gallons per minute of the size of leak associated with distribution pressures. Addendum: TRWD Assumable Water Loss Table

#### **Evaluation process**

All the above programs are monitored monthly and recorded electronically on the computer for evaluation and measuring the effectiveness of each program. Executive summary reports are generated for projections and as a measuring tool for staff and management.

#### **5-year and 10 year Water Conservation Targets and Goals**

ECCFWSD is dedicated toward water conservation and promoting the protection water quality within the Cedar Creek Watershed area. The District has been a stakeholder to the Cedar Creek Water Protection Plan since the plan's inception. The District's 5-year goal is to continue promoting water conservation and to decrease the District's un-accountable water percentage through best management practices mentioned above, while maintaining an active role as stewards and promoters of the adopted watershed plan. The District provides water conservation hand-out material in the office lobby and promotes conservation tips on the District's website.

#### **5-year Target and Goals**

ECCFWSD goals are to achieve a maximum water usage of 170 gallons per day per meter. Using the TCEQ meter to population calculation of 3 family members per household this equates to 57 gallons per capita per day by the 5-year goal ending in 2019. ECCFWSD also plans to achieve an un-accountable water loss goal of 10 gallons per day per meter which equates to 4 gallons per capita per day by the 5-year goal ending in 2016.

#### **10-year Targets and Goals**

ECCFWSD goals are to maintain a maximum water usage 170 gallons per day per meter. Using the TCEQ meter to population calculation of 3 family members per household this equates to 57 gallons per capita per day. ECCFWSD also plans to achieve an un-accountable water loss goal of 8 gallons per day per meter which equates to 3 gallons per capita per day. The District has met this goal so far except of their fiscal year of 2011-2012. Addendum: ECCFWSD Annual Customer Unit Report.

#### **ECCFWSD District History**

ADDENDUM: ECCFWSD Annual Water Customer Unit Report from fiscal year of 1994-05 to 2012-13 reflect an actual annual running average of 159 gallons of water sold per day per meter. The

difference between water pumped and water sold is known as unaccountable water loss. The difference between the water pumped of 181-gallons per day per meter and the water sold to customers of 152 gallons per meter per day equates to 29 gallons per meter per day or a 16 percent of unaccountable water loss. Water loss accountability is the main goal of the district and is dedicated to reducing this ratio to 15% and down to 10% within the full 10-year program. The District's most recent annual report see "Addendum: Water Conservation Plan Annual Report for Retail Suppliers".

The "Addendum: East Cedar Creek FWSD 20-yr Usage Projection" reflects the District goal to maintain water consumption under the 170 gallons per day per meter long term.

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

In order to conserve the available water supply and protect the integrity of water supply facilities, with particular regard for domestic water use, sanitation, assist with fire protection, protect and preserve public health, welfare, and safety and minimize the adverse impacts of water supply shortage or other water supply emergency conditions, East Cedar Creek Fresh Water Supply District hereby adopts the following regulations and restrictions on the delivery and consumption of water.

Water uses regulated or prohibited under this Conservation / Drought Contingency Plan (the Plan) are considered to be non-essential and continuation of such uses during times of water shortage or other emergency water supply condition are deemed to constitute a waste of water. **Section XII: Water Restriction through Rates and/or Allocation defines the changes in the District's water rate and water allocation process.** **Section XIII: Enforcement and Penalties** defines the District's process for penalties and violations of the Plan

### **Section IV: Public Involvement**

Opportunity for the public to provide input into the preparation of the Plan was provided by East Cedar Creek Fresh Water Supply District by means of a public notice of a public meeting to accept input on the Plan.

### **Section V: Public Education & Notification of stages**

The East Cedar Creek Fresh Water Supply 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. The public will be notified through billing notices, ECCFWSD website, newspapers, as well as with signs posted in public areas. If conditions become critical notice in addition to the above public notice procedures alerts will be disseminated to television and radio stations.

This information will be provided by means of press releases.

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

East Cedar Creek FWSD purchases raw water from Tarrant Regional Water District. Therefore the ECCFWSD Plan is an extension of the Tarrant Regional Water District's Plan. ECCFWSD's plan extends the effort of conservation for non-consumption use of treated water for public use prior to and during times of drought and conservation emergencies.

The service area of the East Cedar Creek Fresh Water Supply District is located within the Region C and East Cedar Creek Fresh Water Supply District has provided a copy of this Plan to the Region C and Tarrant Regional Water District.

### **Section VII: Authorization**

The General Manager, or his/her designee is hereby authorized and directed to implement the applicable provisions of this Plan upon determination that such implementation is necessary to protect

public health, safety, and welfare. The General Manager, or his/her designee, shall have the authority to initiate or terminate drought or other water supply emergency response measures as described in this Plan.

The General Manager, or his/her designee may decide not to order the implementation of a drought response stage or water emergency even though one or more of the trigger criteria for the stage are met. Factors which could influence such a decision include, but are not limited to, the time of year, weather conditions, the anticipation of replenished water supplies, or the anticipation that additional facilities will become available to meet needs.

### **Section VIII: Application**

The provisions of this Plan shall apply to all persons, customers, and property utilizing water provided by the East Cedar Creek Fresh Water Supply District. The terms “person” and “customer” as used in the Plan include individuals, corporations, partnerships, associations, and all other legal entities.

### **Section IX: Definitions**

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

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

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

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

Customer: any person, company, or organization using water supplied by East Cedar Creek Fresh Water Supply District.

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

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

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

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

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

Non-essential water use: water uses that are not essential or required for the protection of public,



health, safety, and welfare, including:

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

### **Section X: Initiation and Termination of Drought and Emergency Response Stages**

The provisions of this Plan shall apply to all persons, customers, and property utilizing potable water provided by ECCFWSD. The terms “person” and “customer” as used in the Plan include individuals, corporations, partnerships, associations, and all other legal entities. The Plan does not apply to locations using treated wastewater effluent or private wells or their own water rights in the Trinity River.

The Plan may be applied to the entire ECCFWSD service area or geographic portions of the service area as necessary. If the Plan is applied only to a limited sector, the boundaries will be defined in terms of roadways, creeks and other easily distinguishable features, such as city limits.

#### **Initiation of a Drought and Emergency Response Stage**

The General Manager, or his/her official designee, shall monitor water supply and/or demand conditions on a daily basis and shall determine when one or more of the trigger conditions for a drought or emergency stage is met. The following actions will be taken when a drought stage is initiated:

- The public will be notified through billing notices, ECCFWSD website, newspapers, as well as with signs posted in public areas. If conditions become critical notice in addition to the above public notice procedures alerts will be disseminated to television and radio stations.
- ECCFWSD will notify the Executive Director of TCEQ within 5 business days when mandatory provisions of the plan are activated.

For other trigger conditions, the General Manager or his/her official designee may decide not to order the implementation of a drought response stage or water emergency even though one or more of the trigger criteria for the stage are met. Factors which could influence such a decision include, but are not limited to, the time of the year, weather conditions, the anticipation of replenished water supplies, or the anticipation that additional facilities will become available to meet needs. The reason for this decision should be documented.

#### **Termination of a Drought Stage**

The General Manager or his/her official designee will order the termination of a drought response stage or water emergency when the conditions for termination are met. The following actions will be taken when a drought stage is terminated:



- The public will be notified through billing notices, ECCFWSD website, newspapers, as well as with signs posted in public areas.
- If any mandatory provisions of the drought contingency plan that have been activated are terminated, ECCFWSD will notify the Executive Director of the TCEQ within 5 business days.

The General Manager or his/her official designee may decide, under special circumstances, not to order the termination of a drought response stage or water emergency even though the conditions for termination of the stage are met. Factors which could influence such a decision include, but are not limited to, the time of the year, weather conditions, or the anticipation of potential changed conditions that warrant the continuation of the drought stage. The reason for this decision should be documented.

## **Section XI: Drought and Emergency Response Stages**

### **Stage 1, Water Watch**

#### **Triggering Conditions**

- ECCFWSD water demand exceeds 85% of reliable delivery capacity for three consecutive days. The delivery capacity could be system wide or in a specified portion of the system.
- ECCFWSD water demand for all or part of the delivery system approaches delivery capacity because delivery capacity is inadequate.
- ECCFWSD water treatment or distribution system becomes contaminated.
- ECCFWSD water supply system is unable to deliver water due to the failure or damage of major water system components, or due to other criteria, such as energy shortages or outages.
- TRWD initiated Stage 1 – Water Watch for one or more of the following reasons:
  - Total raw water supply in TRWD western and eastern division reservoirs drops below 75% (25% depleted) of conservation storage.
  - Water demand for all or part of the TRWD delivery system exceeds delivery capacity because delivery capacity is inadequate.
  - Water demand is projected to approach the limit of TRWD's permitted supply.
  - Water supply source becomes contaminated.
  - Water supply system is unable to deliver water due to the failure or damage of major water system components.
  - The TRWD General Manager, with the concurrence of the TRWD Board of Directors, finds that conditions warrant the declaration of a Stage 1 drought.

#### **Terminating Conditions for Stage 1**

Stage 1 will be terminated when TRWD reservoirs exceeds 95% of conservation storage or remains above 85% for 90 consecutive days, whichever occurs first or when local circumstances that caused the initiation of Stage 1 no longer prevail.

#### **Goal for Use Reduction**

The goal for water use reduction under Stage 1, Water Watch, is to decrease use by five percent. If circumstances warrant or if required by TRWD, the General Manager or his/her official designee can set a goal for greater water use reduction.

### Actions Available under Stage 1, Water Watch

The General Manager or his/her official designee may order the implementation of any of the other actions listed below, as deemed necessary. The supplier must notify TCEQ within five business days if any mandatory measures are implemented.

The General Manager or his/her designee will notify wholesale customers of actions being taken and require them to implement the same stage and measures.

Under potential penalty for violation, the following water use restrictions shall apply:

#### All Water Users

- Initiate restrictions to prohibit non-essential water use as follows:
  - Hosing of paved areas, such as sidewalks, driveways, parking lots, tennis courts, or other impervious surfaces, except to alleviate an immediate health or safety hazard.
  - Hosing of buildings or other structures for purposes other than fire protection or surface preparation prior to painting.
- Washing of any motor vehicle, motorbike, boat, trailer, airplane, or other vehicle shall be limited to the use of a hand-held bucket or a hand-held hose equipped with a positive-pressure shutoff nozzle for quick rinses. Vehicle washing may be done at any time on the premises of a commercial car wash or commercial service station. Companies with an automated on-site vehicle washing facility may wash its vehicles at any time. Further, such washing may be exempt from these requirements if the health, safety, and welfare of the public are contingent upon frequent vehicle cleansing, such as garbage trucks and vehicles used to transport food and perishables.
  - The filling, draining, or refilling of swimming pools, wading pools, hot tubs and Jacuzzi type pools except to maintain adequate water levels for structural integrity, proper operation and maintenance, and/or to alleviate issues that pose a public safety risk.
- Prohibit using water in such a manner as to allow runoff or other waste, including:
  - 1) failure to repair a controllable leak, including a broken sprinkler head, a leaking valve, leaking or broken pipes, or a leaking faucet;
  - 2) operating a permanently installed irrigation system with: (a) a broken head; (b) a head that is out of adjustment and the arc of the spray head is over a street or parking lot; or (c) a head that is misting because of high water pressure; or
  - 3) during irrigation, allowing water to (a) run off a property and form a stream of water in a street for a distance of 50 feet or greater; or (b) to pond in a street or parking lot to a depth greater than one-quarter of an inch.
- Prohibit outdoor watering with hose-end sprinklers or irrigation systems between 10 a.m. and 6 p.m.
- Limit landscape watering with hose-end sprinklers or irrigation systems at each service address to twice per week. Includes landscape watering of parks, golf courses and sports fields.
  - No landscape watering on Mondays

- Residential customers with street addresses ending in an even number (0, 2, 4, 6, or 8) may water on Wednesdays and Saturdays.
- Residential customers with street addresses ending in an odd number (1, 3, 5, 7, 9) may water on Thursdays and Sundays.
- All non-residential locations (apartment complexes, businesses, industries, parks, medians, etc.) may water on Tuesdays and Fridays.

#### Exceptions:

- Foundations may be watered up to two hours on any day by handheld hose; or using a soaker hose or drip irrigation system placed within 24-inches of the foundation that does not produce a spray of water above the ground.
- Trees (up to two years) may be watered up to two hours on any day by handheld hose, drip irrigation, a soaker hose or tree bubbler. Tree watering is limited to an area not to exceed the drip line of a tree.
- Irrigation of landscaped beds and personal food gardens is permitted any time by means of a hand-held hose, a faucet filled bucket or watering can (five gallons or less), by soaker hose or drip irrigation system.
- Outdoor watering at service addresses with large multi-station irrigation systems may take place in accordance with a variance granted by the General Manager, if the General Manager determines that a property cannot be completely irrigated with an average of three-quarters of an inch of water in a single day, and that the property should be divided into sections to be irrigated on different days.
- Twice per week landscape watering restrictions do not apply to locations using well water, treated wastewater effluent, or other sources not connected to the East Cedar Creek FWSD water system.
- Establishing new turf is discouraged. If new hydro-mulch, grass sod, or grass seed is installed for the purpose of establishing a new lawn, there are no watering restrictions for the first 30 days while it is being established. After that, the watering restrictions set forth in this stage apply. (This exception does not include over seeding with rye since turf already exists.)
- All users are encouraged to reduce frequency of draining and refilling swimming pools.
- All users are encouraged to use Texas native and drought tolerant plants in landscaping.

#### City and Local Governments

- Review conditions and problems that caused Stage 1. Take corrective action.
- Increase public education efforts on ways to reduce water use.
- Increase enforcement efforts.
- Intensify leak detection and repair efforts.
- Audit all city and local government irrigation systems to ensure proper condition, settings, and operation.
- Identify and encourage voluntary reduction measures by high-volume water users through water use audits.
- Landscape watering of municipal parks, golf courses, and sports fields is limited to twice per week watering schedule; or twice per week per irrigation station if a variance is granted by the

General Manager, or his/her designee. (See exceptions to outdoor watering restrictions in all water users category for rules that apply to facilities with large multi-station irrigation systems.)

Exceptions:

- Golf courses may water greens and tee boxes without restrictions, however watering must be done before 10 a.m. and after 6 p.m.
- Skinned areas of sports fields may be watered as needed for dust control.
- Reduce non-essential water use. As used herein, non-essential water uses are those that do not have any health or safety impact and are not needed to meet the core function of the agency.
- The General Manager or his/her designee will notify wholesale customers of actions being taken and request them to implement the same drought stage and measures.

Commercial or Industrial

- All actions listed above for all water users apply to commercial and industrial users.
- Landscape watering of parks, golf courses, and sports fields is limited to twice per week watering schedule; or twice per week per irrigation station if a variance is granted by the Water Utilities Director. (See exceptions to outdoor watering restrictions in all water users category above for rules that apply to facilities with large multi-station irrigation systems.)

Exceptions:

- Golf courses may water greens and tee boxes without restrictions, however watering must be done before 10 a.m. and after 6 p.m.
- Skinned areas of sports fields may be watered without restrictions as needed for dust control.
- Professional sports fields (playing fields with a stadium only – not surrounding landscaping) may be watered as needed to maintain league standards.
- Stock at commercial plant nurseries is exempt from Stage 1 watering restrictions.
- Hotels, restaurants, and bars are encouraged to serve drinking water to patrons on an “on demand” basis.
- Hotels are encouraged to implement laundry conservation measures by encouraging patrons to reuse linens and towels.

**Stage 2, Water Warning**

Triggering Conditions

- ECCFWSD water demand exceeds 90% of reliable delivery capacity for two consecutive days. The delivery capacity could be system wide or in a specified portion of the system.
- ECCFWSD water demand for all or part of the delivery system equals or exceeds delivery capacity because delivery capacity is inadequate.
- ECCFWSD water treatment or distribution system becomes contaminated.
- ECCFWSD water supply system is unable to deliver water due to the failure or damage of major water system components, or due to other criteria, such as energy shortages or outages.
- TRWD initiated Stage 2 – Water Warning for one or more of the following reasons:

- Total raw water supply in TRWD western and eastern division reservoirs drops below 60% (40% depleted) of conservation storage.
- Water demand for all or part of the TRWD delivery system exceeds delivery capacity because delivery capacity is inadequate.
- Water demand is projected to approach the limit of TRWD's permitted supply.
- Water supply source becomes contaminated.
- Water supply system is unable to deliver water due to the failure or damage of major water system components.
- The TRWD General Manager, with the concurrence of the TRWD Board of Directors, finds that conditions warrant the declaration of a Stage 2 drought.

#### Terminating Conditions for Stage 2, Water Warning

Stage 2 will be terminated when TRWD reservoirs exceeds 75% of conservation storage or remains at or above 70% for 30 consecutive days whichever occurs first or when the local circumstances that caused the initiation of Stage 2 no longer exist.

#### Goal for Use Reduction

The goal for water use reduction under Stage 2, Water Warning, is to decrease use by ten percent. If circumstances warrant or if required by TRWD, the General Manager or his/her official designee can set a goal for greater water use reduction. **See Section XII: Restriction through Rates and/or Allocation**

#### Actions Available under Stage 2, Water Warning

The General Manager and/or his designee may order the implementation of any of the actions listed below, as deemed necessary. ECCFWSD must notify TCEQ within five business days if any mandatory measures are implemented.

Under potential penalty for violation, the following water use restrictions shall apply:

#### All Water Users

- Continue actions under Stage 1.
  - Due to the variation in water storage and delivery systems of TRWD customers, specific watering days per address may vary across TRWD's service area. Maximum of once per week watering for hose-end sprinklers and automatic irrigation systems based on odd/even addresses and day of week schedule may be initiated.

#### Exceptions:

- Watering with a handheld hose, soaker hose or drip irrigation may occur any day and any time.
- Variances may be available through the water utility department for the following:
  - All users are encouraged to wait until the current drought or emergency situation has passed before establishing new landscaping. Variances granted for establishing new turf grass or landscaping will be for a maximum of 30 days from the date of approval then maximum of once-per-week watering schedule applies.
  - Variances do not apply to the installation of cool season grasses (over seeding).



- Outdoor watering at service addresses with large multi-station irrigation systems may take place in accordance with a variance granted by the Water Utilities Director, if the Water Utilities Director determines that a property cannot be completely irrigated with an average of three-quarters of an inch of water in a single day, and that the property should be divided into sections to be irrigated on different days. If approved, no station will be watered more than once per week.
- Restrictions do not apply to well water, reclaimed water, or other alternative water sources.
- Encourage the use of covers for all types of pools, hot tubs, and Jacuzzi type pools when not in use.

### City and Local Governments

In addition to actions listed above:

- Continue or initiate any actions available under Stage 1.
- Review conditions or problems that caused Stage 2. Take corrective action.
- Increase frequency of media releases on water supply conditions.
- Further accelerate public education efforts on ways to reduce water use.
- Landscape watering of municipal parks, golf courses, and sports fields is limited to once every seven days; or once every seven days per irrigation station if a variance is granted by the General Manager. (See Stage 1 exceptions to outdoor watering restrictions in all water users category for rules that apply to facilities with large multi-station irrigation systems.)

#### Exceptions:

- Golf courses may water greens and tee boxes as needed to keep them alive, however watering must be done before 10 a.m. and after 6 p.m. Fairways are restricted to once per week watering as outlined above. Golf course rough cannot be watered. Watering of athletic fields (field only, does not include surrounding landscaped areas) used for organized sports practice, competition, or exhibition events may occur as necessary to protect the health and safety of the players, staff, or officials present for athletic events. Encouraged to reduce water use by ten percent.
- Eliminate non-essential water use. As used herein, non-essential water uses are those that do not have any health or safety impact and are not needed to meet the core function of the agency.

### Commercial or Industrial

- All actions listed above for all water users apply to commercial and industrial users.
- Landscape watering of parks, golf courses, and sports fields is limited to once every seven days; or once every seven days per irrigation station if a variance is granted by the General Manager. (See Stage 1 exceptions to outdoor watering restrictions in all water users category for rules that apply to facilities with large multi-station irrigation systems.)

#### Exceptions:

- Golf courses may water greens and tee boxes as needed to keep them alive, however watering must be done before 10 a.m. and after 6 p.m. Fairways are restricted to once per week watering as outlined above. Golf course rough cannot be watered.
  - Watering of athletic fields (field only, does not include surrounding landscaped areas) used for organized sports practice, competition, or exhibition events may occur as necessary to protect the health and safety of the players, staff, or officials present for athletic events. Encouraged to reduce water use by ten percent.
- Use of water from hydrants for any purpose other than firefighting related activities, or other activities necessary to maintain public health, safety and welfare, requires a variance issued by the Water Utilities Director. Fire hydrant use may be limited to only designated hydrants. Upon declaration of this drought stage, all holders or applicants of a Water Fire Hydrant Meter Agreement are required to apply for a variance as set forth in this plan. If conditions allow, as determined by the Water Utilities Director, the use of water from hydrants may continue until the Water Utilities Director or his/her official designee issues a determination on the petition for variance. If conditions do not allow, the Water Utilities Director may require all fire hydrant meters to be immediately returned from the field, pending determination of each petition for variance.

### **Stage 3, Water Emergency**

#### **Triggering Conditions**

- ECCFWSD water demand exceeds 95% of reliable delivery capacity for one day. The delivery capacity could be system wide or in a specified portion of the system.
- ECCFWSD demand for all or part of the delivery system exceeds delivery capacity because delivery capacity is inadequate.
- ECCFWSD water treatment or distribution system becomes contaminated.
- ECCFWSD water supply system is unable to deliver water due to the failure or damage of major water system components, or due to other criteria, such as energy shortages or outages.
- The TRWD has initiated Stage 3, Water Emergency, which may be initiated by one or more of the following:
  - Total raw water supply in TRWD western and eastern division reservoirs drops below 45% (55% depleted) of conservation storage.
  - Water demand for all or part of the TRWD delivery system exceeds delivery capacity because delivery capacity is inadequate.
  - Water demand is projected to approach or exceed the limit of TRWD's permitted supply.
  - Water supply source becomes contaminated.
  - Water supply system is unable to deliver water due to the failure or damage of major water system components.
  - The TRWD General Manager, with the concurrence of the TRWD Board of Directors, finds that conditions warrant the declaration of a Stage 3 drought.

#### **Terminating Conditions for Stage 3, Water Emergency**

Stage 3, Water Emergency, will be terminated when TRWD reservoirs exceeds 60% of conservation storage or remains at or above 55% for 30 consecutive days, whichever occurs first or when local circumstances causing the initiation of Stage 3 no longer exist

#### Goal for Use Reduction

The goal for water use reduction under Stage 3, Water Emergency, is to decrease use by 20 percent. If circumstances warrant, the General Manager, or his/her designee can set a goal for greater water use reduction.

#### Water Use reduction Actions under Stage 3, Water Emergency

The General Manager and/or his designee may order the implementation of any of the actions listed below, as deemed necessary. ECCFWSD must notify TCEQ within five business days if any mandatory measures are implemented.

- Continue actions available under Stages 1 and 2.

Require customers (including indirect customers) to initiate Stage 3 in their drought contingency plans. Indirect customers include any wholesale customer of TRWD's primary wholesale customers to the extent provided for in water sales contracts.

Under potential penalty for violation, the following water use restrictions shall apply:

#### All Water Users

- Prohibit all outdoor watering.

##### Exceptions:

Watering with hand-held hose, soaker hose or drip irrigation system may occur any day and any time. (The intent of this measure is to allow for the protection of structural foundations, trees, and other high value landscape materials).

- Restrictions do not apply to well water, reclaimed water, or other alternative water sources.
- Irrigation of new landscapes and/or turf grass installations is prohibited by means of automatic irrigation system or hose-end sprinkler. Variances may be granted for those landscape projects started prior to the initiation of stage 3 drought restrictions. However, variances will not be granted for the irrigation of new landscape and/or turf grass installations after the initiation of Stage 3 drought restrictions.
- Prohibit washing of paved areas by any means except where a variance is granted to alleviate a possible public health and safety risk. Any power washing activities must be performed by a professional power washing service utilizing high efficiency equipment and a vacuum recovery system where possible.

- Prohibit hosing of buildings or other structures for purposes other than fire protection or surface preparation prior to painting with high-pressure equipment. Must be performed by a professional power washing service utilizing high efficiency equipment and a vacuum recovery system where possible.
- Vehicle washing is restricted to commercial car washes, commercial service stations, or professional washing services only. This includes home and charity car washing. The washing of garbage trucks and vehicles used to transport food and/or other perishables may take place as necessary for health, sanitation, or public safety reasons.
- Prohibit permitting of private pools. Pools already permitted may be completed and filled. Existing private and public pools may add water to maintain pool levels, but may not be drained and refilled.
- Prohibit the operation of ornamental fountains or ponds that use potable water except where necessary to support aquatic life or water quality.
- No applications for new, additional, expanded or increase-in-size water service connections, meters, service lines, pipeline extensions, mains, or water service facilities of any kind shall be allowed or approved.

#### City and Local Governments

In addition to actions listed above:

- Continue or initiate any actions available under Stages 1 and 2.
- Review conditions or problems that caused Stage 3. Take corrective action.
- Implement viable alternative water supply strategies.
- Increase frequency of media releases explaining emergency situation.
- Landscape watering at municipal parks, golf courses, and sports fields is prohibited. Variances may be granted by the water provider under special circumstances.
- Prohibit the permitting of new swimming pools, Jacuzzi type pools, spas, ornamental ponds and fountain construction. Pools already permitted and under construction may be completely filled with water.

#### Exceptions

- Golf course greens may be watered by hand-held hose as necessary. .
- Institute a mandated reduction in deliveries to all customers. Such a reduction will be distributed as required by Texas Water Code §11.039.
- If TRWD has imposed a reduction in water available to customers, impose the same percent reduction on wholesale customers.
- Emergency inner-connections between viable public water entities will be implemented when possible.
- Public notification by news media, radio, mailings and other electronics means available will

be implemented to advise customers of target location sites should the disbursement of alternate drinking water in containers become necessary.

#### Commercial or Industrial

- All actions listed above for all water users apply to commercial and industrial users. Landscape watering at parks, golf courses, and sports fields is prohibited. .

#### Exceptions

- Golf course greens may be watered by hand as needed to keep them alive, however watering must be done before 10 a.m. and after 6 p.m.
- Professional sports fields (playing fields with a stadium only – not surrounding landscaping) may be watered as needed to maintain league standards.
- Hotels, restaurants, and bars required to serve drinking water to patrons on an “on demand” basis.
- Hotels are required to implement laundry conservation measures by encouraging patrons to reuse linens and towels.
- Stock at commercial plant nursery may be watered only with a hand-held hose, hand-held watering can, or drip irrigation system.
- Commercial water users required to reduce water use by a set percentage determined by the General Manager.

### **Section XII: Water Restriction through Rates and/or Allocation**

In the event that the triggering criteria specified in the Section XI warrants action the General Manager or his/her designee is hereby authorized to initiate the following water rate structure until the severe condition/s no longer exists as a threat to public health, welfare and safety. **All water and sewer monthly minimums and sewer rates will not be affected.**

Customer Definition	Cost per 1,000 gallons for 0 to 3,000 gal.	Cost per 1,000 gallons for 3,001 to 10,000 gal.	Cost per 1,000 gallons for over 10,000 gal.
Residential	\$3.25	\$5.25	\$7.50
Non-Residential	\$3.25	\$5.25	\$7.50

**Non-Residential:** Commercial, Multi-Family, RV Parks, Industry and Retail Customers

### **Section XIII: Water Rationing**

If water shortages worsen, all Residential Customers will be limited to 4,000 gallons per month and any water usage thereafter will be charged at \$10.00 per thousand gallons. All Commercial Customers will be evaluated on a case by case basis. **Both Residential and Commercial Customers will be notified of the set monthly allocations the month prior to implementation. See Section XIV: Enforcement and Penalties**

### **Section XIV: Enforcement and Penalties**

- (a) No person/customer shall knowingly or intentionally allow the use of water from the East Cedar Creek Fresh Water Supply District for residential, commercial, industrial, agricultural, governmental, or any other purpose in a manner contrary to any provision of this Plan, or in an



amount in excess of that permitted by the drought response stage in effect at the time pursuant to action taken by General Manager, or his/her designee, in accordance with provisions of this Plan.

- (b) Any person who violates this Plan is guilty of a misdemeanor and, upon conviction shall be punished by a fine of not less than FIFTY dollars (\$50.00) and not more than TWO HUNDRED dollars (\$200.00). Each day that one or more of the provisions in this Plan is violated shall constitute a separate offense. If a person/customer is convicted of three or more distinct violations of this Plan, the General Manager or his/her designee shall, upon due notice to the customer, be authorized to discontinue water service to the premises where such violations occur. Services discontinued under such circumstances shall be restored only upon payment of a re-connection charge, hereby established at \$100.00, and any other costs incurred by the East Cedar Creek Fresh Water Supply District in discontinuing service. In addition, suitable assurance must be given to the General Manager that the same action shall not be repeated while the Plan is in effect. Compliance with this plan may also be sought through injunctive relief in the district court.
- (c) Any person/customer, including a person classified as a water customer of the East Cedar Creek Fresh Water Supply District, in apparent control of the property where a violation occurs or originates shall be presumed to be the violator, and proof that the violation occurred on the person's property shall constitute that the person in apparent control of the property committed the violation, but any such person/customer shall have the right to show that he/she did not commit the violation.
- (d) Any employee of the East Cedar Creek Fresh Water Supply District or police officer may issue a citation to a person/customer he/she reasonably believes to be in violation of this Ordinance. The citation shall be prepared in duplicate and shall contain the name and address of the alleged violator, offense charged and notice that if any penalty fees charged for the violation occurrence are not paid within 15-days proceedings will be filed with the Justice of the Peace Court for a court date regarding the violation. If the alleged violator fails to appear in Justice of the Peace Court, a warrant for his/her arrest may be issued. A summons to appear may be issued in lieu of an arrest warrant

#### **Section XV: Variances**

The General Manager, or his/her designee, may, in writing, grant temporary variance for existing water uses otherwise prohibited under this Plan if it is determined that failure to grant such variance would cause an emergency condition adversely affecting the health, sanitation, or fire protection for the public or the person requesting such variance and if one or more of the following conditions are met:

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

Persons/customer requesting an exemption from the provisions of this Ordinance shall file a petition for variance with the East Cedar Creek Fresh Water Supply District after the Plan or a particular drought response stage has been invoked. All petitions for variances shall be reviewed by the General Manager, or his/her designee, and shall include the following:

- (a) Name and address of the petitioner(s).

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

Variances granted by the East Cedar Creek Fresh Water Supply District shall be subject to the following conditions, unless waived or modified by the General Manager or his/her designee:

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

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

#### **Section XVI: Severability**

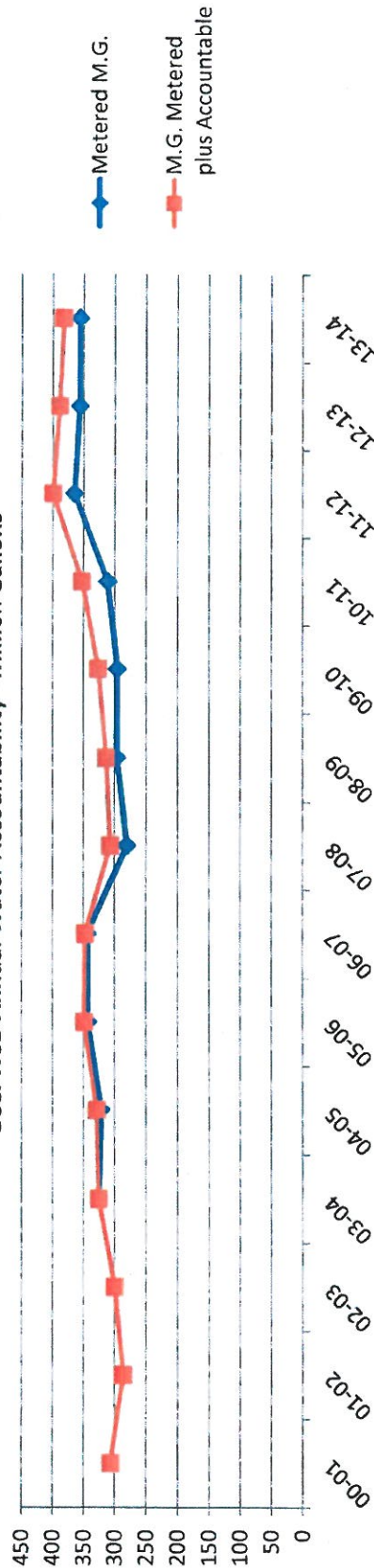
It is hereby declared to be the intention of the East Cedar Creek Fresh Water Supply District that the sections, paragraphs, sentences, clauses, and phrases of this Ordinance are severable and, if any phrase, clause, sentence, paragraph, or section of this Plan shall be declared unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs, and sections of this Plan.

## **Addendums**

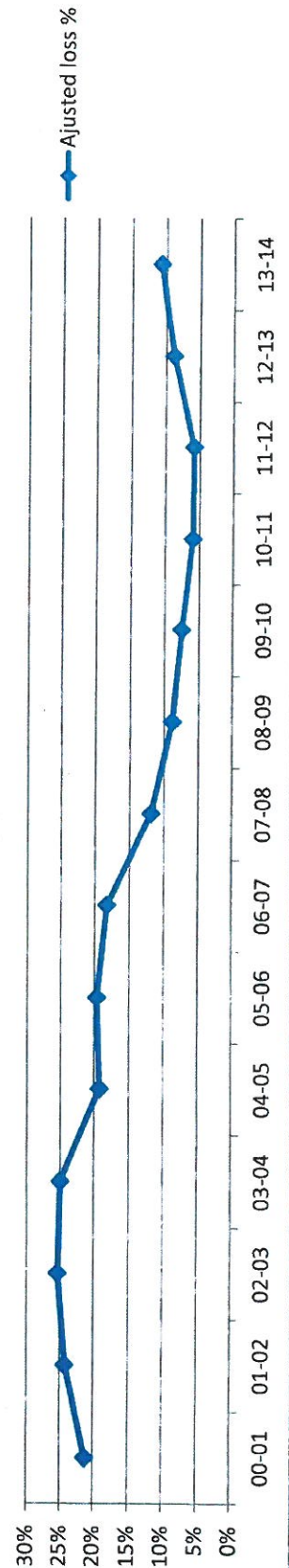
## ECCFWSD Annual Water Accountability - Million Gallons

Fiscal Year	Pumped M.G.	Metered M.G.	Pump/Sold Loss M.G.	Accountable Water loss M.G.	M.G. Metered plus Accountable	M.G. Adjusted Gallons Loss	Adjusted loss %	Water Customers	Population 3 per meter	GPCD Metered
00-01	389	306	82.51	No Program	306	82.51	21%	5,074	15,221	55
01-02	377	286	91.52	No Program	286	91.52	24%	5,032	15,095	52
02-03	401	300	101.75	No Program	300	101.75	25%	5,194	15,583	53
03-04	434	325	108.39	No Program	325	108.39	25%	5,252	15,756	57
04-05	407	322	85.32	7	329	78.32	19%	5,306	15,919	55
05-06	435	343	91.46	6	349	85.46	20%	5,358	16,073	58
06-07	425	344	81.57	4	348	77.57	18%	5,445	16,335	58
07-08	349	280	68.55	27	307	41.55	12%	5,499	16,498	47
08-09	344	296	47.46	17	313	30.46	9%	5,541	16,624	49
09-10	353	295	57.58	31	326	26.58	8%	5,558	16,675	49
10-11	375	311	64.52	42	353	22.52	6%	5,549	16,647	51
11-12	425	365	60.10	35	400	25.10	6%	5,794	17,381	58
12-13	427	356	70.91	33	389	37.91	9%	6,297	18,891	52
13-14	429	356	73.36	27	383	46.36	11%	6,326	18,978	51

ECCFWSD Annual Water Accountability - Million Gallons



Adjusted loss %



**TABLE 1. Leak Rates from Holes of Known Size**  
GALLONS PER MINUTE - gpm

Area of Leak Square Inches	Pressure - Pounds per Square Inch (psi)					
	10	20	40	60	80	100
0.005	0.5	0.8	1.1	1.3	1.5	1.7
0.01	1.1	1.5	2.2	2.6	3.1	3.4
0.025	2.7	3.8	5.4	6.6	7.6	8.5
0.05	5.4	7.6	11	13	15	17
0.075	8.1	11	16	20	23	26
0.1	11	15	22	26	31	34
0.2	22	31	43	53	61	68
0.3	32	46	65	79	92	102
0.4	43	61	86	106	122	136
0.5	54	76	108	132	153	171
0.6	65	92	129	159	183	205
0.7	76	107	151	185	214	239
0.8	86	122	173	211	244	273
0.9	97	137	194	238	275	307
1	108	153	216	264	305	341
1.1	119	168	237	291	336	375
1.2	129	183	259	317	366	409
1.3	140	198	280	343	397	443
1.4	151	214	302	370	427	478
1.5	162	229	324	396	458	512
1.6	173	244	345	423	488	546
1.7	183	259	367	449	519	580
1.8	194	275	388	476	549	614
1.9	205	290	410	502	580	648
2	216	305	431	528	610	682
2.5	270	381	539	661	763	853
3	324	458	647	793	915	1023
4	431	610	863	1057	1220	1364

The above table is based on the following formula:

$$\text{Flow} = 2.8 \times \text{Area} \times \text{Square Root of } (148 \times \text{Pressure})$$

Flow - Gallons per Minute

Area - Square Inches

Pressure - Pounds per Square Inch. (psi)

Example use of TABLE 1.

A hole 1/8 inch by 1 1/4 inch in size at 50 pounds of pressure

First calculate the area

1/8 inch = 0.125 inches

1-1/4 inch = 1.25 inches

Area = 0.125 X 1.25 = 0.156 square inches

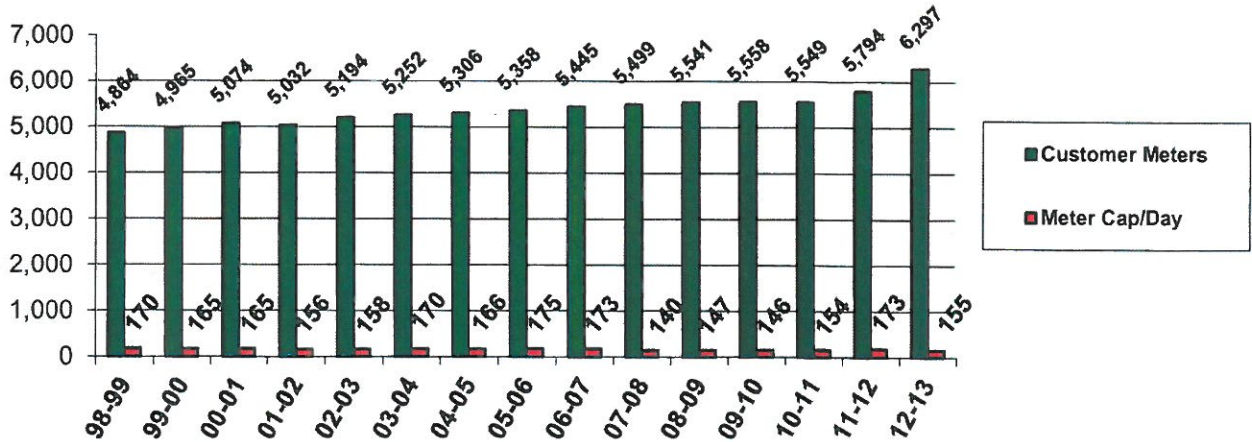
From the table the size that is closest is 0.1 and 0.2 square inches, and the pressure is between 40 and 60 psi. The flow rate is going to be about 36 gallons per minute.



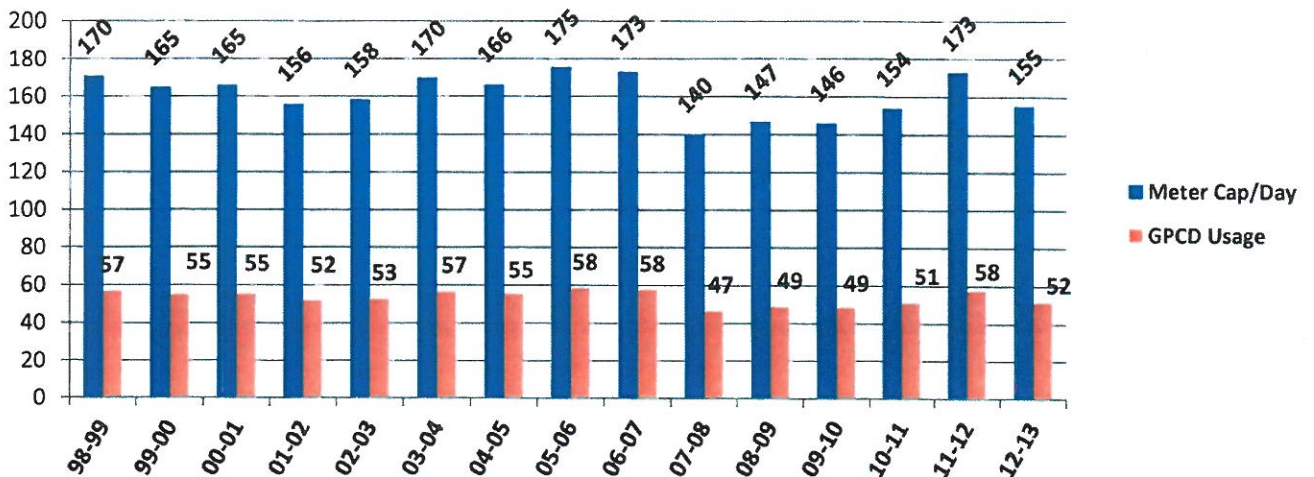
## ECCFWSD Annual Customer Unit Report - Both WTP's

Budget Year	Gallons Sold-MG	Customer Meters	Meter Cap/Day	Unit + or -	Percent + or -	Population 3 per Meter	GPCD Usage
94-95	248.8	4,612	148				
95-96	257.9	4,680	151	68	1.47%	14,039	50
96-97	259.0	4,736	150	57	1.21%	14,209	50
97-98	251.4	4,733	146	-4	-0.08%	14,198	49
98-99	302.5	4,864	170	131	2.76%	14,591	57
99-00	298.2	4,965	165	102	2.09%	14,896	55
00-01	306.4	5,074	165	108	2.18%	15,221	55
01-02	285.9	5,032	156	-42	-0.82%	15,095	52
02-03	299.6	5,194	158	163	3.23%	15,583	53
03-04	325.4	5,252	170	58	1.11%	15,756	57
04-05	321.5	5,306	166	54	1.03%	15,919	55
05-06	343.1	5,358	175	52	0.97%	16,073	58
06-07	343.5	5,445	173	87	1.63%	16,335	58
07-08	280.3	5,499	140	54	0.99%	16,498	47
08-09	296.5	5,541	147	42	0.77%	16,624	49
09-10	295.5	5,558	146	17	0.31%	16,675	49
10-11	310.9	5,549	154	-9	-0.17%	16,647	51
11-12	365.0	5,794	173	245	4.41%	17,381	58
12-13	356.3	6,297	155	503	8.69%	18,891	52
10-yr Avg.	315.2	5412	159.6	65.5	1.22%	16,235	53

**15-yr - Customer Meter / capita / day**



**15 - yr Meter Capacity per Day conversion to GPCD (3 persons per meter)**



## Water Conservation Plan Annual Report Retail Water Supplier

### CONTACT INFORMATION

Name of Entity: EAST CEDAR CREEK FWSD

Public Water Supply Identification Number (PWS ID): 1070167 & 1070019

Certificate of Convenience and Necessity (CCN) Number: \_\_\_\_\_

Surface Water Rights ID Number: \_\_\_\_\_

Wastewater ID Number: \_\_\_\_\_

Check all that apply:



Retail Water Supplier



Wholesale Water Supplier



Wastewater Treatment Utility

Address: PO BOX 309 City: Mabank Zip Code: 75147

Email: Angie@eastcedarcreek.net Telephone Number: 903-887-7103

Regional Water Planning Group: C [Map](#)

Groundwater Conservation District: \_\_\_\_\_ [Map](#)

Form Completed By: Angela Crowsey Title: Office Manager

Date: 03/05/14

Reporting Period (**check only one**):



Fiscal

Period Begin (mm/yyyy) \_\_\_\_\_ Period End (mm/yyyy) \_\_\_\_\_



Calendar

Period Begin (mm/yyyy) 01/2013 Period End (mm/yyyy) 12/2013

Check all of the following that apply to your entity:



Receive financial assistance of \$500,000 or more from TWDB



Have 3,300 or more retail connections



Have a water right with TCEQ

## SYSTEM DATA

### Retail Customer Categories\*

- Residential Single Family
- Residential Multi-family
- Industrial
- Commercial
- Institutional
- Agricultural

*\*Recommended Customer Categories for classifying your customer water use. For definitions, refer to [Guidance and Methodology on Water Conservation and Water Use](#).*

1. For this reporting period, select the category(s) used to classify customer water use:

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Residential Single Family | <input checked="" type="checkbox"/> Commercial   |
| <input checked="" type="checkbox"/> Residential Multi-family  | <input type="checkbox"/> Institutional           |
| <input type="checkbox"/> Industrial                           | <input checked="" type="checkbox"/> Agricultural |

2. For this reporting period, enter the gallons of **metered retail water** used by each customer category. If the Customer Category does not apply, enter zero or leave blank.

Retail Customer Category	Number of Connections	Gallons Metered
Residential Single Family	5,983	295,914,162
Residential Multi-family	53	3,713,723
Industrial		
Commercial	273	43,603,885
Institutional		
Agricultural	28	12,388,934
<b>Total Retail Water Metered<sup>1</sup></b>	6,337	355,620,704

1. Residential + Industrial + Commercial + Institutional + Agricultural = Total Retail Water Metered



## Water Use Accounting

	Total Gallons During the Reporting Period
<b>Water Produced:</b> Water from permitted sources such as rivers, lakes, streams, and wells. <i>Same as line 14 of the water loss audit.</i>	424,955,918
<b>Wholesale Water Imported:</b> Purchased wholesale water transferred into the system. <i>Same as line 15 of the water loss audit.</i>	
<b>Wholesale Water Exported:</b> Wholesale water sold or transferred out of the system. <i>Same as line 16 of the water loss audit.</i>	
<b>System Input:</b> Total water supplied to system and available for retail use.	424,955,918
	Produced + Imported – Exported = System Input
<b>Total Retail Water Metered</b>	355,620,704
<b>Other Authorized Consumption:</b> Water that is authorized for other uses such as the following: This water may be metered or unmetered. <i>Same as the total of lines 19, 20, and 21 of the water loss audit.</i> - back flushing                      - line flushing - storage tank cleaning           - municipal golf courses/parks - fire department use - municipal government offices	26,740,230
<b>Total Authorized Use:</b> All water that has been authorized for use.	382,360,934
	Total Retail Water + Other Authorized Consumption = Total Authorized Use
<b>Apparent Losses:</b> Water that has been consumed but not properly measured or billed. <i>Same as line 28 of the water loss audit.</i> <i>(Includes losses due to customer meter accuracy, systematic data discrepancy, unauthorized consumption such as theft)</i>	8,319,955
<b>Real Losses:</b> Physical losses from the distribution system prior to reaching the customer destination. <i>Same as line 29 of the water loss audit.</i> <i>(Includes physical losses from system or mains, reported breaks and leaks, or storage overflow)</i>	5,471,665
<b>Unidentified Water Losses:</b> Unreported losses not known or quantified.	28,803,364
	System Input - Total Authorized Use - Apparent Losses - Real Losses = Unidentified Water Losses
<b>Total Water Loss</b>	42,594,984
	Apparent + Real + Unidentified = Total Water Loss

## Targets and Goals

Provide the **specific and quantified five and ten-year targets** as listed in your current Water Conservation Plan. Target dates and numbers should match your current Water Conservation Plan.

Achieve Date	Target for Total GPCD	Target for Water Loss (expressed in GPCD)	Target for Water Loss Percentage (expressed in percentage)
Five-year target date: _____	57	4	7
Ten-year target date: _____	57	4	7

## Gallons Per Capita per Day (GPCD) and Water Loss

Provide current GPCD and water loss totals. To see if you are making progress towards your stated goals, compare these totals to the above targets and goals. Provide the population and residential water use of your service area.

Total System Input in Gallons	Permanent Population <sup>1</sup>	Total GPCD
424,955,918 Water Produced + Wholesale Imported - Wholesale Exported	18,108	64 (System Input ÷ Permanent Population) ÷ 365

1. Permanent Population is the total permanent population of the service area, including single family, multi-family, and group quarter populations.

Residential Use in Gallons (Single Family + Multi-family )	Residential Population <sup>1</sup>	Residential GPCD
299,627,884	18,108	45 (Residential Use ÷ Residential Population) ÷ 365

1. Residential Population is the total residential population of the service area, including only single family and multi-family populations.

Total Water Loss	Permanent Population	Water Loss	
		GPCD <sup>1</sup>	Percent <sup>2</sup>
42,594,984 Apparent + Real + Unidentified = Total Water Loss	18,108	6	10%

1. (Total Water Loss ÷ Permanent Population) ÷ 365 = Water Loss GPCD  
 2. (Total Water Loss ÷ Total System Input) x 100 = Water Loss Percentage



## Water Conservation Programs and Activities

*As you complete this section, review your utility's water conservation plan to see if you are making progress towards meeting your stated goals.*

1. What year did your entity adopt or revise the most recent Water Conservation Plan? 2013
2. Does The Plan incorporate [Best Management Practices](#)? ☐ Yes ☐ No
3. Using the table below select the types of Best Management Practices or water conservation strategies actively administered during this reporting period and estimate the savings incurred in implementing water conservation activities and programs. Leave fields blank if unknown.

Methods and techniques for determining gallons saved are unique to each utility as they conduct internal effective cost analyses and long-term financial planning. Texas Best Management Practices can be found at TWDB's Water Conservation Best Management Practices [webpage](#). The [Alliance for Water Efficiency Water Conservation Tracking Tool](#) may offer guidance on determining and calculating savings for individual BMPs.

Best Management Practice	Check if Implemented	Estimated Gallons Saved
<b>Conservation Analysis and Planning</b>		
Conservation Coordinator	<input type="checkbox"/>	
Cost Effective Analysis	<input type="checkbox"/>	
Water Survey for Single Family and Multi-family Customers	<input type="checkbox"/>	
<b>Financial</b>		
Wholesale Agency Assistance Programs	<input type="checkbox"/>	
Water Conservation Pricing	<input type="checkbox"/>	
<b>System Operations</b>		
Metering New Connections and Retrofitting Existing Connections	<input type="checkbox"/>	
System Water Audit and Loss Control	<input type="checkbox"/>	
<b>Landscaping</b>		
Landscape Irrigation Conservation and Incentives	<input type="checkbox"/>	
Athletic Fields Conservation	<input type="checkbox"/>	
Golf Course Conservation	<input type="checkbox"/>	
Park Conservation	<input type="checkbox"/>	
<b>Education and Public Awareness</b>		
School Education	<input type="checkbox"/>	
Public Information	<input checked="" type="checkbox"/>	
<b>Rebate, Retrofit, and Incentive Programs</b>		
Conservation Programs for ICI Accounts	<input type="checkbox"/>	
Residential Clothes Washer Incentive Program	<input type="checkbox"/>	
Water Wise Landscape Design and Conversion Programs	<input type="checkbox"/>	

Showerhead, Aerator, and Toilet Flapper Retrofit	<input type="checkbox"/>	
Residential Toilet Replacement Programs	<input type="checkbox"/>	
ICI Incentive Programs	<input type="checkbox"/>	
<b>Conservation Technology</b>		
Water Reuse	<input type="checkbox"/>	
New Construction Graywater	<input type="checkbox"/>	
Rainwater Harvesting and Condensate Reuse	<input type="checkbox"/>	
<b>Regulatory and Enforcement</b>		
Prohibition on Wasting Water	<input type="checkbox"/>	
Other, please describe:		
<b>Total Gallons of Water Saved</b>		0

4. For this reporting period, provide the estimated gallons of direct or indirect reuse activities.

Reuse Activity	Estimated Volume (in gallons)
On-site irrigation	
Plant wash down	27,084,443
Chlorination/de-chlorination	
Industrial	
Landscape irrigation (parks, golf courses)	
Agricultural	
Other, please describe:	
<b>Total Volume of Reuse</b>	27,084,443

5. For this reporting period, estimate the savings from water conservation activities and programs.

Gallons Saved/Conserved	Gallons Recycled/Reused	Total Volume of Water Saved <sup>1</sup>	Dollar Value of Water Saved <sup>2</sup>
	27,084,443	27,084,443	

1. Estimated Gallons Saved/Conserved + Estimated Gallons Recycled/Reused = Total Volume Saved

2. Estimate this value by taking into account water savings, the cost of treatment or purchase of water, and deferred capital costs due to conservation.



6. During this reporting period, did your rates or rate structure change? ☐ Yes ☒ No

Select the type of rate pricing structures used. Check all that apply.

<input type="checkbox"/>	Uniform Rates	<input type="checkbox"/>	Water Budget Based Rates	<input type="checkbox"/>	Surcharge - seasonal
<input type="checkbox"/>	Flat Rates	<input type="checkbox"/>	Excess Use Rates	<input type="checkbox"/>	Surcharge - drought
<input checked="" type="checkbox"/>	Inclining/Inverted Block Rates	<input type="checkbox"/>	Drought Demand Rates	Other, please describe:	
<input type="checkbox"/>	Declining Block Rates	<input type="checkbox"/>	Tailored Rates		
<input type="checkbox"/>	Seasonal Rates	<input type="checkbox"/>	Surcharge - usage demand		

7. For this reporting period, select the public awareness or educational activities used.

	Implemented	Number/Unit
<i>Example: Brochures Distributed</i>	√	10,000/year
<i>Example: Educational School Programs</i>	√	50 students/month
Brochures Distributed	<input checked="" type="checkbox"/>	100
Messages Provided on Utility Bills	<input checked="" type="checkbox"/>	18,000
Press Releases	<input type="checkbox"/>	
TV Public Service Announcements	<input type="checkbox"/>	
Radio Public Service Announcements	<input type="checkbox"/>	
Educational School Programs	<input type="checkbox"/>	
Displays, Exhibits, and Presentations	<input checked="" type="checkbox"/>	2
Community Events	<input type="checkbox"/>	
Social Media campaigns	<input type="checkbox"/>	
Facility Tours	<input type="checkbox"/>	
Other :	<input checked="" type="checkbox"/>	Quarterly newsletter

## Leak Detection and Water Loss

1. During this reporting period, how many leaks were repaired in the system or at service connections? 583

Select the main cause(s) of water loss in your system.

- ☒ Leaks and breaks  
☒ Un-metered utility or city uses  
☐ Master meter problems  
☐ Customer meter problems  
☐ Record and data problems  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

2. For this reporting period, provide the following information regarding meter repair:

Type of Meter	Total Number	Total Tested	Total Repaired	Total Replaced
Production Meters		5		
Meters larger than 1 ½"				
Meters 1 ½ or smaller				

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

## Program Effectiveness and Drought

1. In your opinion, how would you rank the effectiveness of your conservation activities?

Customer Classification	Less Than Effective	Somewhat Effective	Highly Effective	Does Not Apply
Residential Customers	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Industrial Customers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Institutional Customers	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Commercial Customers	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agricultural Customers	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. During the reporting period, did you implement your Drought Contingency Plan?

☒ Yes

☐ No

If yes, how many days were water use restrictions in effect? 275

If yes, check the reason(s) for implementing your Drought Contingency Plan.

☐  
☐  
☐

Water Supply Shortage  
 High Seasonal Demand  
 Capacity Issues

☐  
☐  
☒

Equipment Failure  
 Impaired Infrastructure  
 Other: Followed TRWA when they implemented their Drought Contingency restrictions

3. Select the areas for which you would like to receive more technical assistance:

☐  
☐  
☐  
☐  
☐  
☐

Best Management Practices  
 Drought Contingency Plans  
 Landscape Irrigation  
 Leak Detection and Equipment  
 Rainwater Harvesting  
 Rate Structures

☒  
☐  
☐  
☒  
☐  
☐

Educational Resources  
 Water Conservation Annual Reports  
 Water Conservation Plans  
 Water IQ: Know Your Water  
 Water Loss Audits  
 Recycling and Reuse

**SUBMIT**



### East Cedar Creek FWSD 20-yr Water Usage Projection

Fiscal Year	Demand Acre-Ft.	Demand - MG	Meters	Usage/Meter	Population Growth Capita/Meter 3
13-14	1,142	372	6,340	161	19,020
14-15	1,192	388	6,619	161	19,857
15-16	1,244	405	6,910	161	20,731
16-17	1,299	423	7,214	161	21,643
17-18	1,356	442	7,532	161	22,595
18-19	1,416	461	7,863	161	23,589
19-20	1,478	482	8,209	161	24,627
20-21	1,543	503	8,570	161	25,711
21-22	1,611	525	8,947	161	26,842
22-23	1,682	548	9,341	161	28,023
23-24	1,756	572	9,752	161	29,256
24-25	1,833	597	10,181	161	30,543
25-26	1,914	624	10,629	161	31,887
26-27	1,998	651	11,097	161	33,290
27-28	2,086	680	11,585	161	34,755
28-29	2,178	710	12,095	161	36,284
29-30	2,273	741	12,627	161	37,881
30-31	2,373	773	13,182	161	39,547
31-32	2,478	807	13,763	161	41,288
32-33	2,587	843	14,368	161	43,104

