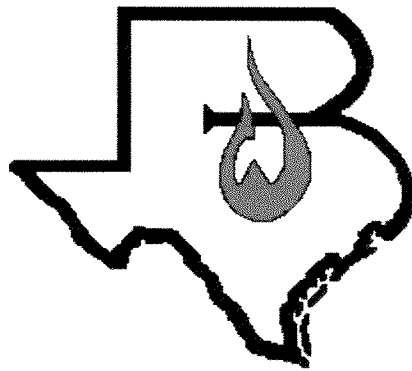


WATER CONSERVATION Plan

FOR

**BROOKESMITH SPECIAL
UTILITY DISTRICT**

**P.O BOX 27
BROWNWOOD, TX 76804**



Revised
October 2018

Prepared by
Roger Sikes
Water Loss & Conservation Specialist
Brookesmith Special Utility District

I. INTRODUCTION

The Brookesmith Special Utility District (The District) of Brown County, Texas is a water supply entity operating under the provisions of Chapter 65, of the Texas Water Code. The Board of Directors has the managing control and operation of the District's Water System. The Directors are elected by the qualified voters residing within the District.

The District serves an area of approximately 660 square miles.

The District has experienced significant growth in the last several years. The District obtains treated water from the Brown County Water Improvement District No. 1 (WID) through the WID's water treatment plant near the City of Brownwood.

II. UTILITY EVALUATION

A. WATER SUPPLY AND DISTRIBUTION SYSTEM INFORMATION

- | | | |
|----|--|-------------------|
| 1. | Population of Service Area (Estimated) | 9,941 |
| 2. | Area of Service Area | 660 square miles |
| 3. | Water Production and Sales Information | |
| a. | Water supplied during the last year | 281,494,300 gals. |
| b. | Average Water Supplied for last 2 years | 263,956,050 gals. |
| c. | Monthly Water Sales for last year (2019) | |

WATER SOLD (gals.)

<u>Month</u>	<u>Total</u>
January	17,464,100
February	16,655,500
March	16,638,500
April	21,948,700
May	20,348,500
June	30,780,500
July	44,804,100
August	34,688,400
September	27,197,200
October	16,467,100
November	18,983,800

December 15,517,900

TOTAL 281,494,300

- d. Highest daily water use on record for system 2,954,000 (gpd)
- e. Peak daily use for the last year 2,892,000(gpd)
- e. Unaccounted for Water

$$338,048,323 - 281,494,300 / 338,048,323 \times 100 = 16.7\%$$

B UTILITY FINANCIAL OPERATION INFORMATION

- 1. Water Rate Structure
 - a. Existing Rates Structure. See Section V
- 2. Sources of Revenue for the Utility
 - a. Percent of Annual Revenues from water rates 97%
 - b. Percent of Annual Revenues from all other sources 3%
- 3. Approximate Annual Operating Costs \$1,550,000

C OTHER APPLICABLE INFORMATION

- 1. Copies of applicable local regulation relating to Water Conservation and Emergency Water Demand Management Plan.
None available
- 2. Other applicable documents. None available
- 3. Information on Civic Groups, Organizations and entities – See Appendix D
- 4. Number and Type of Meter Connections in Service Area
 - 3682 – Residential
 - 5- Multi-Family
 - 16- Institutional
 - 58 – Commercial
 - 4 Industrial
 - 69- Agricultural
- 5. Net Gain of New Connections per year
 - 45 – Residential
 - 5-Multi-Family

6. Source of Water
 - a. Brown County WID No. 1 Water Treatment Plant 604,291,919 gal/year
7. Safe Annual Yield of Water Supply 27,000 acre/ft.
8. Design Capacity of Water System 6,000,000 (mgd)
9. Major High Volume Customers

	<u>Customer</u>	<u>Quantity (gal/month)</u>
(1)	TPWD	2,522,000
(2)	Baptist Encampment	2,333,300
(3)	Brownwood CC	2,261,600
(4)	Angie Tyson	1,922,200
(5)	Les Copeland	1,774,500

10. Population and water use projections

<u>Year</u>	<u>Population</u>	<u>Water Demand</u>
2020	10,341	668,080,305
2021	10,476	676,801,980
2022	10,611	685,523,655
2023	10,746	694,245,330
2024	10,881	702,967,005
2025	11,016	711,688,680
2026	11,151	720,410,355
2027	11,286	729,132,030
2028	11,421	737,853,705
2029	11,556	746,575,380

III. PUBLIC INVOLVEMENT

A. PUBLIC AT LARGE

1. The District holds regular board meetings once each month. Directors meet the second Tuesday of each month. These meetings are open to the public and customers of the District and anyone is free to be put on the agenda to speak to the Board of Directors. The agenda will be posted

at Office and on Brookesmith SUD web site. At these meetings, they hear the concerns of the Customers, which can assist them in making decisions.

- B. Information may also be found on the website at www.brookesmithwater.com

IV. WATER CONSERVATION PLAN

A. WATER USE AND WATER LOSS GOALS

The District's 5 and 10 year goals for water use are 112 gpcd and 114 10 year goal GPCD . The 5 year water loss goal for the District is 22 gpcd and the 10 year goal is 18 gpcd.

B. RETROFIT PROGRAM

Customers in existing buildings that do not have water saving devices will be encouraged to replace their old plumbing fixtures. The advertising program will help inform them of the advantages of installing water saving devices and the enacted excess water rate structure mentioned below should encourage them to be conservative in their water use. Water saving kits will be available to aid in their water conservation efforts.

C. WATER RATE STRUCTURE

A water rate structure has been implemented which encourages water conservation,. The rate structure includes a stepped rate in time of drought to increase with the increased water usage. When a customer applies for a tap, the water rate is identified based on the guidelines set forth in the plan.

D. METERING

The District currently meters 100% of the water sold. The District will repair or replace meters that appear to have high or low water usage. Incorporated into the Water Conservation Plan, the District will set up the following meter-testing schedule:

1. Production Meters test once a year.
2. Meters larger than 1" – test once a year minimum.
3. Meters 1" and smaller – test every ten years minimum.
4. The District's goal is to test fifteen percent (15%) minimum of all meters.
5. The District uses a computer billing system, which handles all of the billing.

The system compares meter readings monthly and notes dramatic changes.

6. The district conducts internal meter testing by qualified operators.
7. The district has also installed inline master meters, and is monitoring them on a daily basis.

E. WATER CONSERVATION LANDSCAPING

The advertising program will include suggestions on landscaping and irrigation procedures, which will save water usage and money.

F. DISTRICT'S LEAK DETECTION AND REPAIR PROGRAM

1. Perform an annual water audit.
2. Leak Detection and Location Program includes visual inspection by meter readers and District employees will keep a constant watch out for abnormal conditions indicating leaks (i.e. defective fire hydrants and flush valves, un- authorized use of fire hydrants and water main leaks).
3. The District maintains an adequate and qualified maintenance staff, which is available to repair leaks as they are located and perform corrective measures.
3. Monthly water use accounting by the billing computer system, which identifies high water use for service meters indicating possible leaks or malfunction.
4. The District has recently hired a Water Loss and Conservation specialist and his primary duties are to monitor the system on a daily basis, conduct monthly water audits, keep records of water loss, water sales, and unaccounted for water. Since the District started the program in the first of 2004 they have reported a considerable reduction in water loss.

G. RECYCLING AND REUSE

The District has no means to recycle or reuse water. There are no customers at this time that would be able to recycle water.

H. IMPLEMENTATION AND ENFORCEMENT

The Water Conservation Plan will be enforced by the following methods:

1. The rate structure should encourage retrofitting of old plumbing fixtures which are using large amounts of water. Customers will realize that replacing their fixtures will save them water and money.
2. The water rate structure will be enforced, if customers do not pay their water bill they will have their water service discontinued.

I. DISTRIBUTION SYSTEM AND RESIDENTIAL PRESSURE CONTROLS

The District maintains pressure reducing valves at various locations in the system as necessary.

J. WATER CONSERVATION PLAN ANNUAL REPORT

The District will file an Annual Report to the Executive Administrator describing the implementation, status, and quantitative effectiveness of the water conservation program until the financial obligations to the state have been discharged.

The Annual Report will be submitted within 60 days after the anniversary date of loan closing unless special circumstances exist. In these cases, the District will request an alternative annual reporting date.

K. WHOLESALE CUSTOMERS

The District sales whole sale water to the City of Santa Anna and Coleman SUD

Opportunity for the public to provide input into the preparation of the Plan was provided by the Brookesmith SUD by means of Public Forum In Board Of Directors Meeting held Monthly.

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 Brookesmith SUD

VII. SCHEDULE FOR IMPLEMENTING THE PLAN TO ACHIEVE TARGETS AND GOALS

The Brookesmith Special Utility District will adhere to the following schedule, to achieve the targets and goals for water conservation:

- Calibrations of meters for all treated water deliveries are conducted semi-annually
- The Brookesmith SUD meter replacement program is as follows:
 - Meters will continue to be monitored for accuracy annually and replaced on a fifteen-year cycle
- Water audits are conducted annually
 - Real water losses are identified and corrected
 - Real water losses are minimized by replacement of deteriorating water mains and appurtenances, as is conducted by Brookesmith SUD staff on an on-going basis
- The Brookesmith SUD will mail out material developed by the staff, materials obtained from the Texas Water Development Board, Texas Commission on Environmental Quality or other sources semi-annually (once in the spring and once in the summer) to all customers
- Water conserving pricing **(optional)**
 - The Brookesmith SUD current rates are shown in
 - The Brookesmith SUD will continue to review rates annually to insure water revenues exceed expenses and replacement costs and to discourage excessive and wasteful use
- The leak detection program described in the plan is currently in use by Brookesmith SUD, which reduces real water losses
 - Inspections and soundings of all water main fittings and connections are conducted annually
 - Intermittent night-flow measurements are conducted annually
 - Pressure is controlled to just above the standard-of-service level by use of SCADA system
 - Pressure zones are operated based on the topography
 - Surges in Pressure are limited by control valves
 - Nighttime pressure is reduced by control valves when feasible

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**RESOLUTION FOR ADOPTION OF A
WATER CONSERVATION PLAN**

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE BROOKESMITH
SPECIAL UTILITY DISTRICT ADOPTING A WATER CONSERVATION
PLAN.

WHEREAS, the Board recognizes that the amount of water available to the Brown County WID #1 and its water utility customers are limited and subject to depletion during periods of extended drought;

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

WHEREAS, Chapter 11 of the Texas Water Code and Title 30 Texas Administrative Code Chapter 288, applicable rules of the Texas Commission on Environmental Quality require all public water supply systems in Texas to prepare a water conservation plan; and

WHEREAS, as authorized under law, and in the best interests of the customers of the Brookesmith Special Utility District, 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 THE
BROOKESMITH SPECIAL UTILITY DISTRICT

SECTION 1. That the Water Conservation Plan attached hereto as Exhibit "A" and made part hereof for all purposes be, and the same is hereby, adopted as the official policy of the Brookesmith Special Utility District.

SECTION 2. That Steve Adams, General Manager is hereby directed to implement, administer, and enforce the Water Conservation Plan.

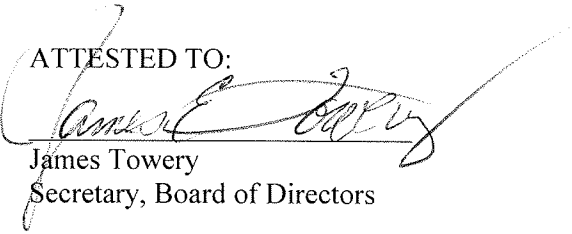
SECTION 3. That this resolution shall take effect immediately upon its passage.

DULY PASSED BY THE BOARD OF DIRECTORS OF THE BROOKESMITH SPECIAL UTILITY DISTRICT, ON THIS 9 day of October, 2018.



Lewis Lehman
President, Board of Directors

ATTESTED TO:



James Towery
Secretary, Board of Directors