ANGELINA AND NACOGDOCHES COUNTIES WATER CONTROL AND IMPROVEMENT DISTRICT NO.1

WATER CONSERVATION PLAN - 2019

PREPARED BY

STOKES & ASSOCIATES, INC.
CONSULTANT ENGINEERS
P.O. BOX 1114
HENDERSON, TEXAS 75653-1114

ANGELINA-NACOGDOCHES COUNTIES
WATER CONTROL IMPROVEMENT DISTRICT NO. 1
WATER CONSERVATION PLAN - 2019

Overview

The Angelina and Nacogdoches Counties Water Control and Improvement District #1 (District) owns and operates Lake Striker, built in 1957. The lake is located on Striker Creek in Cherokee and Rusk Counties midway between the cities of Jacksonville and Henderson. The estimated watershed of Lake Striker is 182 square miles and the original figures for impoundment at the normal pool elevation of 293.00 msl was 26,960 acre-feet (ac-ft) covering 2,426 surface acres. According to a 1996 TWDB Volumetric Survey of Lake Striker, using the latest technology of the time, the volume was estimated to be 22,865 ac-ft with a surface area of 1,920 acres at the normal pool elevation. Advances in technology and the deposition of sediment are assumed to account for the differences. The 2018 Dam Inspection Report and the 2015 Emergency Action Plan and the 2015 Operation & Maintenance Plan also include other details and background on Lake Striker and the District.

The Amendment to the Certificate of Adjudication No. 06-4847B, approved Aug. 14, 2015 by TCEQ, permitted the District to divert, circulate and recirculate as much water as necessary to consumptively use up to 22,233 acre-feet (ac-ft) of water per year from Lake Striker for industrial and municipal uses.

The District presently has two active raw water industrial customers, Luminant Power & Southern Power. Luminant's power generating facility is located on the west side of Lake Striker and diverts water into the plant for cooling purposes and returns unused water back to Lake Striker. Luminant's contract allows consumptive use of up to 5,000 ac-ft of water annually. Southern's biomass-fueled electrical generating facility is located near Sacul, TX, some 8.1 miles southeast of Lake Striker. Southern diverts water from Lake Striker for cooling purposes and returns unused water to the Angelina River west of the plant. Southern Power's contract allows the consumptive use of up to 6,721 ac-ft of water annually.

The five-year average use for both plants combined (2014-2018) has been 493.47 ac-ft which only amounts to 4.21% of the 11,721 ac-ft available to the industrial users. Of that, the water returned to Lake Striker and/or the Angelina River has averaged 99.90% of diverted water.

In 2018, the City of Henderson, TX, amended an option to purchase from the District up to 7.4MGD (8,289 ac-ft annually) for municipal use through a 10 year renewable agreement. However, to date, the City has not yet begun to purchase water.

Five-Year and Ten-Year Targets

Five and ten year targets for water savings are the responsibility of any municipal use customer. In accordance with the provisions of Title 30 TAC Chapter 288, the raw water contract with a municipality will contain requirements for the city to adopt and maintain a

water conservation plan that includes five and ten-year targets for water savings including:

1. Target goals for municipal use in gallons per capita per day for the wholesaler's service area.
2. Maximum acceptable unaccounted-for water.
3. The basis for the development of these goals.

The targets for water savings for the overall service area of the District are as follows to essentially meet the overall statewide goal of 140 gallons per capita per day:

2010 – 166 gals per capita per day
2020 – 162 gals per capita per day
2030 – 158 gals per capita per day
2040 – 154 gals per capita per day
2050 – 150 gals per capita per day
2060 – 146 gals per capita per day
2070 – 142 gals per capita per day

Water saving goals for the industrial users is limited to reduction of water loss in their process piping and ultimately would be to return 100% of the utilized water to Lake Striker and/or the Angelina River. However, by returning 99.90% currently, a reduction would seem difficult to achieve or at least unlikely. Luminant and Southern both have water accounting systems that monitor usage and loss.

NOTE: The City of Henderson has a water conservation plan on file with the TCEQ, as does industrial customers Luminant and Southern Power.

Metering Devices

Metering devices and practices to measure and account for water will be a requirement in the customer's wholesale water contract.

Record Management Program

The District presently has a record management program for determining water deliveries, sales, and losses.

Metering/Leak-Detection and Repair Program

The raw water supply system will be designed and constructed after successful negotiation and contracting with the proposed municipal customer. Responsibility for metering, leak detection and repair program for the raw water supply system has not been determined.

Reservoir Systems Operations Plan

The District has operational responsibility for Lake Striker. A Reservoir Systems Operations Plan is not applicable since Lake Striker is the only reservoir under the District's control.

Contract Requirements for Successive Customer Conservation

Every water supply contract, entered into or renewed after official adoption of the water conservation plan, will require that each wholesale customer develop and implement a water conservation plan or water conservation measures and a drought contingency plan, in accordance with the provisions of Title 30 TAC Chapter 288. If the customer resells the water, the contract between the District and municipal customer will provide that the contract for the resale of the water must have water conservation requirements so that each

successive customer in the resale of the water will be required to implement water conservation measures in accordance with the provisions of Title 30 TAC Chapter 288.

All municipal customers will be required to provide copies of ordinances adopting a water conservation plan.

Enforcement Procedure & Official Adoption

All future customer cities will be required to provide copies of ordinances outlining means for implementation and enforcement of the water conservation plan.

Coordination with the Regional Water Planning Group(s)

The service area of the District is located within the East Texas Regional Planning Group (I) and the District has provided a copy of this water conservation plan to the East Texas Regional Planning Group.

Plan Review and Update

The District will review and update this water conservation plan not later than May 1, 2019, and every five years thereafter to coincide with the regional water planning group.

Appendix A

Definitions of Commonly Used Terms

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 water supply is made available for future or alternative uses.

Industrial use ▪ The use of water in processes designed to convert materials of a lower order of value into forms having greater usability and commercial value, commercial fish production, and the development of power by means other than hydroelectric, but does not include agricultural use.

Irrigation ▪ The agricultural use of water for the irrigation of crops, trees, and pastureland, including, but not limited to, golf courses and parks which do not receive water through a municipal distribution system.

Municipal per capita water use ▪ The sum total of water diverted into a water supply system for residential, commercial, and public and institutional uses divided by actual population served.

Municipal use ▪ The use of potable water within or outside a municipality and its environs whether supplied by a person, privately owned utility, political subdivision, or other entity as well as the use of sewage effluent for certain purposes, including the use of treated water for domestic purposes, fighting fires, sprinkling streets, flushing sewers and drains, watering parks and parkways, and recreational purposes, including public and private swimming pools, the use of potable water in industrial and commercial enterprises supplied by a municipal distribution system without special construction to meet its demands, and for the watering of lawns and family gardens.

Municipal use in gallons per capita per day ▪ The total average daily amount of water diverted or pumped for treatment for potable use by a public water supply system. The calculation is made by dividing the water diverted or pumped for treatment for potable use by population served. Indirect reuse volumes shall be credited against total diversion volumes for the purpose of calculating gallons per capita per day for targets and goals.

Public water supplier ▪ An individual or entity that supplies water to the public for human consumption.

Regional water planning group ▪ A group established by the Texas Water Development Board to prepare a regional water plan under Texas Water Code, •16.053.

Retail public water supplier ▪ An individual or entity that for compensation supplies water to the public for human consumption. The term does not include an individual or entity that supplies water to itself or its employees or tenants when that water is not resold to or used by others.

Reuse ▪ The authorized use for one or more beneficial purposes of use of water that remains unconsumed after the water is used for the original purpose of use and before that water is either

disposed of or discharged or otherwise allowed to flow into a watercourse, lake, or other body of state-owned water.

Water conservation plan ▪ A strategy or combination of strategies for reducing the volume of water withdrawn from a water supply source, for reducing the loss or waste of water, for maintaining or improving the efficiency in the use of water, for increasing the recycling and reuse of water, and for preventing the pollution of water. A water conservation plan may be a separate document identified as such or may be contained within another water management document(s).

Water loss - The difference between water diverted or treated and water delivered (sold). Water loss can result from:

1. Inaccurate or incomplete record keeping;
2. meter error;
3. unmetered uses such as firefighting, line flushing, and water for public buildings and water treatment plants;
4. leaks; and
5. water theft and unauthorized use.

Wholesale public water supplier ▪ An individual or entity that for compensation supplies water to another for resale to the public for human consumption. The term does not include an individual or entity that supplies water to itself or its employees or tenants as an incident of that employee service or tenancy when that water is not resold to or used by others, or an individual or entity that conveys water to another individual or entity, but does not own the right to the water which is conveyed, whether or not for a delivery fee.

ANGELINA AND NACOGDOCHES COUNTIES WATER CONTROL AND IMPROVEMENT DISTRICT NO.1

DROUGHT CONTINGENCY PLAN - 2019

PREPARED BY

STOKES & ASSOCIATES, INC.
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Section I: Declaration of Policy, Purpose, and Intent

In order to conserve the available water supply and/or to protect the integrity of water supply facilities, with particular regard for domestic water use, sanitation, and fire protection, and to protect and preserve public health, welfare, and safety and minimize the adverse impacts of water supply shortage or other water supply emergency conditions, the Angelina and Nacogdoches Counties Water Control and Improvement District No. 1 (ANCWCID #1) adopts the following Drought Contingency Plan (the Plan).

Section II: Public Involvement

Opportunity for the industrial water customers to provide input into the preparation of the Plan is limited to their providing the necessary feedback through their accounting plans.

Section III: Water Customer Education

The ANCWCID #1 shall periodically provide water customers with information about the Plan, including information about the conditions under which each stage of the Plan is to be initiated or terminated and the drought response measures to be implemented in each stage. This information shall be distributed by providing a copy of the Plan to the customers.

Section IV: Coordination with Regional Water Planning Groups

The water service area of the ANCWCID #1 is located within the East Texas (I) Region and the ANCWCID #1 has provided a copy of the Plan to the East Texas (I) Region.

Section V: Authorization

The ANCWCID #1 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 ANCWCID #1 shall have the authority to initiate or terminate drought or other water supply emergency response measures as described in this Plan.

Section VI: Application

The provisions of this Plan shall apply to all customers utilizing water provided by the ANCWCID #1. The terms “person” and “customer” as used in the Plan include individuals, corporations, partnerships, associations, and all other legal entities.

Presently, two wholesale, industrial customers divert a large amount of water from Lake Striker for cooling purposes at their electric generation stations and return unused water to Lake Striker and/or the Angelina River. The amount of water from Lake Striker consumed by these two customers is a combination of two things, the difference between the amount of diverted water and that amount returned to the lake or river and the amount of additional or “forced” evaporation from the lake or river caused by the higher temperatures of the returned water.

Section VII: Criteria for Initiation and Termination of Drought Response Stages

The ANCWCID #1 shall monitor water supply conditions on a monthly basis and shall determine when conditions warrant initiation or termination of each stage of the Plan. Customer notification of the initiation or termination of drought response stages shall be made by mail or telephone.

The triggering criteria described below are based on the water level in Lake Striker Reservoir.

Stage 1 Trigger -- MILD Water Shortage Condition

Requirements for initiation - The ANCWCID #1 shall recognize that a mild water shortage condition exists when the water level in Lake Striker Reservoir drops to 290.00 amsl.

Requirements for termination - Stage 1 of the Plan shall be rescinded when all of the conditions listed as triggering events have ceased to exist. The ANCWCID #1 shall notify its customers of the termination of Stage 1.

Stage 2 Trigger -- MODERATE Water Shortage Condition

Requirements for initiation - The ANCWCID #1 shall recognize that a moderate water shortage condition exists when the water level in Lake Striker Reservoir drops to 288.00 amsl.

Requirements for termination - Stage 2 of the Plan shall be rescinded when all of the conditions listed as triggering events have ceased to exist. Upon termination of Stage 2, Stage 1 becomes operative. The ANCWCID #1 shall notify its customers of the termination of Stage 2.

Stage 3 Trigger -- SEVERE Water Shortage Condition

Requirements for initiation - The ANCWCID #1 shall recognize that a severe water shortage condition exists when the water level in Lake Striker Reservoir drops to 286.00 amsl.

Requirements for termination - Stage 3 of the Plan shall be rescinded when all of the conditions listed as triggering events have ceased to exist. Upon termination of Stage 3, Stage 2 becomes operative. The ANCWCID #1 shall notify its customers of the termination of Stage 3.

Stage 4 Trigger – EMERGENCY Water Shortage Condition

Requirements for initiation - The ANCWCID #1 shall recognize that an emergency water shortage condition exists when the water level in Lake Striker Reservoir is at 284.00 amsl.

Requirements for termination - Stage 4 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist. Upon termination of Stage 4, Stage 3 becomes operative. The ANCWCID #1 shall notify its customers of the termination of Stage 4.

Section VIII: Drought Response Stages

The ANCWCID #1 shall monitor water supply conditions and, in accordance with the triggering criteria set forth in Section VII, shall determine that mild, moderate, severe or emergency water shortage conditions exist and shall implement the following actions:

Stage 1 Response -- MILD Water Shortage Conditions

Goal: Maintain the pool elevation of Lake Striker at a minimum of 290.00 amsl.

Best Management Practices for Supply Management:

Raise customer awareness of the water supply conditions by initiating regular communication with water customers

Water Use Restrictions for Reducing Demand:

(a) The ANCWCID #1 shall contact water customers to discuss water supply conditions and shall request that water customers initiate voluntary measures to reduce water use (e.g., implement the first stage of the customer's drought contingency plan).

(b) The ANCWCID #1 shall provide periodic reports to the water customers with information regarding current water supply, projected water supply if drought conditions persist, and consumer information on water conservation measures and practices.

Stage 2 Response -- MODERATE Water Shortage Conditions

Goal:

Reduce diversions from reservoir in order to maintain the pool elevation of Lake Striker at a minimum of 288.00 amsl. Pro rata allocations may be initiated.

Best Management Practices for Supply Management:

The ANCWCID #1 may initiate pro rata allocations in reducing diversions up to 10 per cent and may implement water rate surcharge for excessive use.

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Water Use Restrictions for Reducing Demand:

(a) The ANCWCID #1 shall initiate contact with water customers to discuss water supply and pro rata allocation of water diversion.

(b) The ANCWCID #1 shall request water customers to initiate mandatory measures to reduce non-essential water use (e.g., implement the second stage of the customer's drought contingency plan).

(c) The ANCWCID #1 may initiate pro rata allocations of water diversions for each customer according to the procedures in accordance with Texas Water Code Section 11.039

(d) The ANCWCID #1 shall provide periodic reports to the water customers with information regarding current water supply, projected water supply if drought conditions persist, and consumer information on water conservation measures and practices.

Stage 3 Response -- SEVERE Water Shortage Conditions

Goal:

Reduce diversions from reservoir in order to maintain the pool elevation of Lake Striker at a minimum of 286.00 amsl. Pro rata allocations shall be initiated.

Best Management Practices for Supply Management:

The ANCWCID #1 shall initiate pro rata allocations in reducing diversions by 25 per cent and shall implement water rate surcharge for excessive use.

Water Use Restrictions for Reducing Demand:

(a) The ANCWCID #1 shall contact water customers to discuss water supply conditions and shall request that water customers initiate additional mandatory measures to reduce non-essential water use (e.g., implement the second stage of the customers drought contingency plan).

(b) The ANCWCID #1 shall initiate additional pro rata allocations of water diversions for each customer according to the procedures in accordance with Texas Water Code Section 11.039

(c) The ANCWCID #1 shall provide periodic reports to the water customers with information regarding current water supply, projected water supply if drought conditions persist, and consumer information on water conservation measures and practices.

Stage 4 Response – EMERGENCY Water Shortage Conditions

Goal:

Reduce diversions from reservoir in order to maintain the pool elevation of Lake Striker at a minimum of 284.00 amsl. Pro rata allocations shall be initiated.

Best Management Practices for Supply Management:

The ANCWCID #1 shall initiate pro rata allocations in reducing diversions by 50 per cent and shall implement water rate surcharge for excessive use.

Water Use Restrictions for Reducing Demand:

(a) The ANCWCID #1 shall contact water customers and inform them of the serious water supply conditions and shall request that water customers initiate additional mandatory measures to reduce non-essential water use (e.g., implement the additional stages of the customer•s drought contingency plan).

(b) The ANCWCID #1 shall initiate additional pro rata allocations of water diversions and/or deliveries for each customer according to the procedures in accordance with Texas Water Code Section 11.039

(c) The ANCWCID #1 shall provide periodic reports to the water customers with information regarding current water supply, projected water supply if drought conditions persist, and consumer information on water conservation measures and practices.

Section IX: Pro Rata Water Allocation

In the event that the triggering criteria specified in Section VII of the Plan for Stage 2 - Moderate Water Shortage Conditions, Stage 3 – Severe Water Shortage Conditions or Stage 4 – Emergency Water Shortage Conditions have been met, The ANCWCID #1 is hereby authorized initiate allocation of water supplies on a pro rata basis in accordance with Texas Water Code Section 11.039.

Every wholesale water supply contract, entered into or renewed after official adoption of the Plan, including contract extensions, will include a provision requiring that in case of a shortage of water resulting from drought, the water shall be distributed in accordance with Texas Water Code Section 11.039.

Section X: Enforcement

During any period when pro rata allocation of available water supplies is in effect, the Customer shall pay a surcharge equal to five (5) times the normal water charge per 1000 gallons for water diversion in excess of the pro rata allocation, or; $1.00 per 1000 gallons for water diversion in excess of the pro rata allocation, whichever is greater.

Section XI: Variances

The ANCWCID #1 shall, in writing, grant a temporary variance to the pro rata water allocation policies provided by this Plan if it is determined that failure to grant such variance would cause an emergency condition adversely affecting the public health, welfare, or safety 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 shall achieve the same level of reduction in water use.

Persons requesting an exemption from the provisions of this Plan shall file a petition for variance with The ANCWCID #1 within 30 days after pro rata allocation has been invoked. All petitions for variances shall be reviewed by the ANCWCID #1, and shall include the following:

(a) Name and address of the petitioner(s).
(b) Detailed statement with supporting data and information as to how the pro rata allocation of water under the policies and procedures established in the Plan adversely affects the petitioner or what damage or harm shall occur to the petitioner or others if petitioner complies with this Ordinance.
(c) Description of the relief requested.
(d) Period of time for which the variance is sought.
(e) Alternative measures the petitioner is taking or proposes to take to meet the intent of this Plan and the compliance date.
(f) Other pertinent information.

Variances granted by the ANCWCID #1 shall be subject to the following conditions, unless waived or modified by the ANCWCID #1:

(a) Variances granted shall include a timetable for compliance.

(b) Variances granted shall expire and not be renewed when all of the conditions listed in the drought triggering criteria (Section VII) have ceased to exist. Variances granted shall be revoked immediately if the grantee fails to meet the specified variance requirements.

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

Section XII: Severability

It is hereby declared to be the intention of the ANCWCID #1 that the sections, paragraphs, sentences, clauses, and phrases of this Plan 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, since the same would not have been enacted by the ANCWCID #1 without the incorporation into this Plan of any such unconstitutional phrase, clause, sentence, paragraph, or section.

Texas Commission on Environmental Quality

Water Availability Division
MC-160, P.O. Box 13087 Austin, Texas 78711-3087
Telephone (512) 239-4691, FAX (512) 239-2214

Industrial Water Conservation Plan

This form is provided to assist entities in developing a water conservation plan for industrial water use. If you need assistance in completing this form or in developing your plan, please contact the Conservation staff of the Resource Protection Team in the Water Availability Division at (512) 239-4691.

Additional resources such as best management practices (BMPs) are available on the Texas Water Development Board's website http://www.twdb.texas.gov/conservation/BMPs/index.asp. The practices are broken out into sectors such as Agriculture, Commercial and Institutional, Industrial, Municipal and Wholesale. BMPs are voluntary measures that water users use to develop the required components of Title 30, Texas Administrative Code, Chapter 288. BMPs can also be implemented in addition to the rule requirements to achieve water conservation goals.

Contact Information

Name:	Stokes & Associates, Inc.
Address:	605 S. Main, Suite 200, Henderson, TX 75653
Telephone Number:	(903)657-7558 Fax: (903)657-7864
Form Completed By:	Stephen Bennett
Title:	Project Manager/Design Engineer
Signature:	P.E. Date: 04/25/2019

A water conservation plan for industrial use must include the following requirements (as detailed in 30 TAC Section 288.3). If the plan does not provide information for each requirement, you must include in the plan an explanation of why the requirement is not applicable.

I. BACKGROUND DATA

A. Water Use

1. Annual diversion appropriated or requested (in acre-feet):

   22,233

2. Maximum diversion rate (cfs):

   861.42

B. Water Sources

1. Please indicate the maximum or average annual amounts of water currently used and anticipated to be used (in acre-feet) for industrial purposes:

Source	*Water Right No.(s)*	*Current Use*	*Anticipated Use*

Surface Water	72 & 4847B	493.47	410.00
Groundwater			
Purchased			
Total		493.47	410.00

2. How was the surface water data and/or groundwater data provided in B(1) obtained?

   Master meter ; Customer meter X; Estimated ; Other

3. Was purchased water raw or treated?

   If both, % raw X; % treated ; and Supplier(s)

C. Industrial Information

1. Major product(s) or service(s) produced by applicant:

   Power generation

2. North American Industry Classification System (NAICS):

   2 2 1 1 12 &17

II. WATER USE AND CONSERVATION PRACTICES

A. Water Use in Industrial Processes

Production Use	*% Groundwater*	*% Surface Water*	*% Saline Water*	*% Treated Water*	*Water Use (in acre-ft)*
Cooling, condensing, & refrigeration		100			407.06
Processing, washing, transport					
Boiler feed					
Incorporated into product					
Other					

Facility Use	*% Groundwater*	*% Surface Water*	*% Saline Water*	*% Treated Water*	*Water Use (in acre-ft)*
Cooling tower(s)					
Pond(s)					
Once through					
Sanitary & drinking water					
Irrigation & dust control					

1. Was fresh water recirculated at this facility? ☐ Yes ☒ No

2. Provide a detailed description of how the water will be utilized in the industrial process.

   Water is circulated through the plant's heat exchangers, condensers, cooling towers and other equipment. Water not consumed by the process is discharged back into the reservoir in Luminant's case or back into the river/creek in Southern's case.

3. Estimate the quantity of water consumed in production processes and is therefore unavailable for reuse, discharge, or other means of disposal.

   <1% currently per available accounting records

4. Monthly water consumption for previous year (in acre-feet).

Month	*Diversion Amount*	*% of Water Returned (If Any)*	*Monthly Consumption*
January	33728.87	99.9	58.90
February	16087.71	99.9	24.57
March	17809.90	99.9	10.40
April	17235.02	100	2.75
May	15222.37	99.9	86.41
June	33838.67	99.9	87.69
July	40576.23	99.9	129.81
August	46062.25	99.9	66.36
September	17260.03	100	4.49

October	5361.56	100	2.10
November	12992.68	100	4.13
December	5935.77	99.9	15.86
Totals	262111.06	99.9	493.47

5. Projected monthly water consumption for next year (in acre-feet).

Month	*Diversion Amount*	*% of Water Returned (If Any)*	*Monthly Consumption*
January	38578.9	0.06	24.4
February	32368.5	0.10	32.3
March	25303.4	0.08	20.3
April	25198.9	0.06	13.9
May	30399.3	0.08	24.7
June	37480.9	0.17	62.1
July	45834.5	0.17	79.3
August	47338.8	0.19	87.7
September	35084.7	0.07	23.1
October	25433.3	0.05	13.6
November	27238.0	0.05	12.5
December	30022.9	0.04	13.0
Totals	400281.1	0.10	407.1

B. Specific and Quantified Conservation Goal

Water conservation goals for the industrial sector are generally established either for (1) the amount of water recycled, (2) the amount of water reused, or (3) the amount of water not lost or consumed, and therefore is available for return flow.

1. Water conservation goal (water use efficiency measure)

   Type of goal(s):

   0 % reused water

   99.90 % of water not consumed and therefore returned

   Other (specify)

2. Provide specific, quantified 5-year and 10-year targets for water savings and the basis for development of such goals for this water use/facility.

0.10% consumptive use of diverted water (5 yr avg.)

Quantified 5-year and 10-year targets for water savings:

a. 5-year goal: na

b. 10-year goal: na

3. Describe the practice(s) and/or device(s) within an accuracy of plus or minus 5% used to measure and account for the amount of water diverted from the supply source.

   na

4. Provide a description of the leak-detection and repair, and water-loss accounting measures used.

   na

5. Describe the application of state-of-the-art equipment and/or process modifications used to improve water use efficiency.

   na

6. Describe any other water conservation practice, method, or technique which the user shows to be appropriate for achieving the stated goal or goals of the water conservation plan:

   na

III. Water Conservation Plans submitted with a Water Right Application for New or Additional State Water

Water Conservation Plans submitted with a water right application for New or Additional State Water must include data and information which:

1. support the applicant's proposed use of water with consideration of the water conservation goals of the water conservation plan;

2. evaluates conservation as an alternative to the proposed appropriation; and

3. evaluates any other feasible alternative to new water development including, but not limited to, waste prevention, recycling and reuse, water transfer and marketing, regionalization, and optimum water management practices and procedures.

Additionally, it shall be the burden of proof of the applicant to demonstrate that no feasible alternative to the proposed appropriation exists and that the requested amount of appropriation is necessary and reasonable for the proposed use.

Texas Commission on Environmental Quality

Water Availability Division
MC-160, P.O. Box 13087 Austin, Texas 78711-3087
Telephone (512) 239-4691, FAX (512) 239-2214

Utility Profile and Water Conservation Plan Requirements for Wholesale Public Water Suppliers

This form is provided to assist wholesale public water suppliers in water conservation plan development. If you need assistance in completing this form or in developing your plan, please contact the Conservation staff of the Resource Protection Team in the Water Availability Division at (512) 239-4691.

Water users can find best management practices (BMPs) at the Texas Water Development Board's website http://www.twdb.texas.gov/conservation/BMPs/index.asp. The practices are broken out into sectors such as Agriculture, Commercial and Institutional, Industrial, Municipal and Wholesale. BMPs are voluntary measures that water users use to develop the required components of Title 30, Texas Administrative Code, Chapter 288. BMPs can also be implemented in addition to the rule requirements to achieve water conservation goals.

Contact Information

Name:	Angelina-Nacogdoches Counties WCID No.1
Address:	1524 Woodberry, Lufkin, TX 75901
Telephone Number:	(903) 854-4559 Fax: (903) 854-4341
Water Right No.(s):	Certificate of Adjudication No. 06-4847B
Regional Water Planning Group:	Region I, East Texas Regional Water Planning Group
Person responsible for implementing conservation program:	David Mason Phone: (903) 854-4559
Form Completed By:	Stephen G. Bennett, PE
Title:	Project Engineer, Stokes & Associates, Inc.
Signature:	Stephen G. Bennett, P.E. Date: 04/25/2019

A water conservation plan for wholesale public water suppliers must include the following requirements (as detailed in 30 TAC Section 288.5). If the plan does not provide information for each requirement, you must include in the plan an explanation of why the requirement is not applicable.

Utility Profile

I. WHOLESALE SERVICE AREA POPULATION AND CUSTOMER DATA

A. Population and Service Area Data:

1. Service area size (in square miles):

   (Please attach a copy of service-area map)

   18.0 sq. mi.

   Current population of service area: 13,712

2. Current population served for:

   a. Water 13,712

   b. Wastewater 13,712

3. Population served for previous five years:

Year	*Population*
na	na
na	na
na	na
na	na
na	na

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

Year	*Population*
2020	15,240
2030	16,987
2040	18,685
2050	20,509
2060	22,405

5. List source or method for the calculation of current and projected population size.

   Region I, East Texas Regional Planning Group, 2016 Report

B. Customer Data

List (or attach) the names of all wholesale customers, amount of annual contract, and amount of annual use for each customer for the previous year 2018:

Wholesale Customer	*Contracted Amount (Acre-feet)*	*Previous Year Amount of Water Delivered (acre-feet)*
City of Henderson	8,289	0
Luminant	5,000	93.1
Southern Power	6,721	400.37

II. WATER USE DATA FOR SERVICE AREA

A. Water Delivery

Indicate if the water provided under wholesale contracts is treated or raw water and the annual amounts for the previous five years (in acre feet):

Year	*Treated Water*	*Raw Water*
2014	na	487.09
2015	na	342.74
2016	na	394.91
2017	na	317.09
2018	na	493.47
Totals	na	2,035.30

B. *Water Accounting Data*

1. Total amount of water diverted at the point of diversion(s) for the previous five years (in acre-feet) for all water uses:

Year	*2014*	*2015*	*2016*	*2017*	*2018*
Month					
January	39726.9	39880.5	39546.16	40007.4	33728.9
February	36164.29	36170.3	37430.05	35990.1	16087.7
March	40023.27	20514.6	27935.50	20233.6	17809.9
April	37658.97	14797.6	22770.39	38632.6	17235.0
May	25803.25	31517.0	39515.60	39938.7	15222.4
June	38820.06	40131.6	36692.80	37921.5	33838.7
July	46517.57	49750.4	50225.67	42102.6	40576.2
August	49547.04	53364.5	53292.88	34427.3	46062.3
September	40618.26	44072.5	51568.89	21903.7	17260.0
October	40001.51	22080.6	34192.04	25530.7	5361.6
November	28497.29	34908.0	34420.14	25372.1	12992.7
December	39537.85	39983.6	41441.87	23215.2	5935.8
Totals	458316.66	427171.2	469031.98	385275.56	262111.1
5 Yr Avg	400281.12				

2. Wholesale population served and total amount of water diverted for **municipal use** for the previous five years (in acre-feet):

Year	*Total Population Served*	*Total Annual Water Diverted for Municipal Use*
2014	13,712	0
2015	13,712	0
2016	13,712	0
2017	13,712	0
2018	13,712	0

The City of Henderson has a renewable option contract to purchase 8,289 ac-ft of water annually, but has not yet exercised that option.

C. Projected Water Demands

If applicable, project and attach water supply demands for the next ten years using information such as population trends, historical water use, and economic growth in the service area over the next ten years and any additional water supply requirements from such growth.

III. WATER SUPPLY SYSTEM DATA

A. Projected Water Demands

List all current water supply sources and the amounts authorized (in acre feet) with each.

Water Type	*Source*	*Amount Authorized*
Surface Water	Lake Striker	22,233
Groundwater	none	0
Other	none	0

B. Treatment and Distribution System (if providing treated water)

1. Design daily capacity of system (MGD):

   na

2. Storage capacity (MGD):

   a. Elevated na

   b. Ground na

3. Please attach a description of the water system. Include the number of treatment plants, wells, and storage tanks

   na

IV. WASTEWATER SYSTEM DATA – not applicable

A. Wastewater System Data (if applicable)

1. Design capacity of wastewater treatment plant(s) (MGD):

2. Briefly describe the wastewater system(s) of the area serviced by the wholesale public water supplier. Describe how treated wastewater is disposed. Where applicable, identify treatment plant(s) with the TCEQ name and number, the operator, owner, and the receiving stream if wastewater is discharged.

B. Wastewater Data for Service Area (if applicable)

1. Percent of water service area served by wastewater system: %

2. Monthly volume treated for previous five years (in 1,000 gallons):

Year					
Month					
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					
Totals					

Water Conservation Plan

In addition to the description of the wholesaler's service area (profile from above), a water conservation plan for a wholesale public water supplier must include, at a minimum, additional information as required by Title 30, Texas Administrative Code, Chapter 288.5. Note: If the water conservation plan does not provide information for each requirement an explanation must be included as to why the requirement is not applicable.

A. *Specific, Quantified 5 & 10-Year Targets*

The water conservation plan must include specific, quantified 5-year and 10-year targets for water savings including, where appropriate, target goals for municipal use in gallons per capita per day for the wholesaler's service area, maximum acceptable water loss, and the basis for the development of these goals. Note that the goals established by a wholesale water supplier under this subparagraph are not enforceable. These goals must be updated during the 5-year review and submittal.

B. *Measuring and Accounting for Diversions*

The water conservation plan must include a description as to which practice(s) and/or device(s) will be utilized to measure and account for the amount of water diverted from the source(s) of supply.

C. *Record Management Program*

The water conservation plan must include a monitoring and record management program for determining water deliveries, sales, and losses.

D. *Metering/Leak-Detection and Repair Program*

The water conservation plan must include a program of metering and leak detection and repair for the wholesaler's water storage, delivery, and distribution system.

E. *Contract Requirements for Successive Customer Conservation*

The water conservation plan must include a requirement in every water supply contract entered into or renewed after official adoption of the water conservation plan, and including any contract extension, that each successive wholesale customer develop and implement a water conservation plan or water conservation measures using the applicable elements of Title 30 TAC Chapter 288. If the customer intends to resell the water, then the contract between the initial supplier and customer must provide that the contract for the resale of the water must have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures in accordance with the provisions of this chapter.

F. *Reservoir Systems Operations Plan*

The water conservation plan must include a reservoir systems operations plan, if applicable, providing for the coordinated operation of reservoirs owned by the applicant within a common watershed or river basin. The reservoir systems operations plan shall include optimization of water supplies as one of the significant goals of the plan.

G. *Enforcement Procedure and Official Adoption*

The water conservation plan must include a means for implementation and enforcement, which shall be evidenced by a copy of the ordinance, rule, resolution, or tariff, indicating official adoption of the water conservation plan by the water supplier; and a description of the authority by which the water supplier will implement and enforce the conservation plan.

H. Coordination with the Regional Water Planning Group(s)

The water conservation plan must include documentation of coordination with the regional water planning groups for the service area of the wholesale water supplier in order to ensure consistency with the appropriate approved regional water plans.

Example statement to be included within the water conservation plan:

The service area of the _____ (name of water supplier) is located within the _____ (name of regional water planning area or areas) and _____ (name of water supplier) has provided a copy of this water conservation plan to the _____ (name of regional water planning group or groups).

I. Plan Review and Update

A wholesale water supplier shall review and update its water conservation plan, as appropriate based on an assessment of previous 5-year and 10-year targets and any other new or updated information. A wholesale water supplier shall review and update the next revision of its water conservation plan no later than May 1, 2009, and every five years after that date to coincide with the regional water planning group. The revised plan must also include an implementation report.

V. ADDITIONAL CONSERVATION STRATEGIES

Any combination of the following strategies shall be selected by the water wholesaler, in addition to the minimum requirements of 30 TAC §288.5(1), if they are necessary in order to achieve the stated water conservation goals of the plan. The commission may require by commission order that any of the following strategies be implemented by the water supplier if the commission determines that the strategies are necessary in order for the conservation plan to be achieved:

1. Conservation-oriented water rates and water rate structures such as uniform or increasing block rate schedules, and/or seasonal rates, but not flat rate or decreasing block rates;

2. A program to assist agricultural customers in the development of conservation, pollution prevention and abatement plans;

3. A program for reuse and/or recycling of wastewater and/or graywater;

4. Any other water conservation practice, method, or technique which the wholesaler shows to be appropriate for achieving the stated goal or goals of the water conservation plan.

VI. WATER CONSERVATION PLANS SUBMITTED WITH A WATER RIGHT APPLICATION FOR NEW OR ADDITIONAL STATE WATER

Water Conservation Plans submitted with a water right application for New or Additional State Water must include data and information which:

1. support the applicant's proposed use of water with consideration of the water conservation goals of the water conservation plan;

2. evaluates conservation as an alternative to the proposed appropriation; and

3. evaluates any other feasible alternative to new water development including, but not limited to, waste prevention, recycling and reuse, water transfer and marketing, regionalization, and optimum water management practices and procedures.

Additionally, it shall be the burden of proof of the applicant to demonstrate that no feasible alternative to the proposed appropriation exists and that the requested amount of appropriation is necessary and reasonable for the proposed use.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
Water Availability Division - MC-160, P.O. Box 13087 Austin, Texas 78711-3087
Telephone (512) 239-4691, FAX (512) 239-2214

WATER CONSERVATION IMPLEMENTATION REPORT FORM AND SUMMARY OF UPDATES/REVISIONS TO WATER CONSERVATION PLAN

(Texas Water Code §11.1271(b) and Title 30 Texas Administrative Code §288.30(1) to (4))

Please note, this form replaces the following forms: TCEQ-20645 (Non-Public Water Suppliers) and TCEQ-20646 (Public Water Suppliers)

This Form is applicable to the following entities:

1. **Water Right Holders of 1,000 acre-feet or more for municipal, industrial, and other non-irrigation uses.**
2. **Water Right Holders of 10,000 acre-feet or more for irrigation uses.**

The above noted entities are required by rule to submit updates to their water conservation plan(s) and water conservation implementation report(s) every five years. The most current five-year submittal deadline is **May 1st, 2019**. See 30 Texas Administrative Code (TAC) §288.30(1) to (4). Entities must also submit any revisions to their water conservation plan within 90 days of adoption when the plans are revised in between the five-year submittal deadlines. This form may be used for the five-year submittal or when revisions are made to the water conservation plans in the interim periods between five-year submittals. Please complete the form as directed below.

1. Water Right Holder Name: Angelina & Nacogdoches Counties Water Control & Improvement District No. 1
2. Water Right Permit or Certificate Nos. Certificate of Adjudication No. 06-4847B

3. Please Indicate by placing an 'X' next to all that Apply to your Entity:

Water Right Holder of 1,000 acre-feet or more for non-irrigation uses

X_____Municipal Water Use by Public Water Supplier

_____Wholesale Public Water Supplier

X_____Industrial Use

_____Mining Use

_____Agriculture Non-Irrigation

Water Right Holder of 10,000 acre-feet or more for irrigation uses

_____Individually-Operated Irrigation System

_____Agricultural Water Suppliers Providing Water to More Than One User

Water Conservation Implementation Reports/Annual Reports

4. Water Conservation Annual Reports for the previous five years were submitted to the Texas Water Development Board (TWDB) for each of the uses indicated above as required by 30 TAC §288.30(10)(C)? Yes_X___ No_____

TCEQ no longer requires submittal of the information contained in the detailed implementation report previously required in Forms TCEQ-20645 (Non-Public Water Suppliers) and TCEQ-20646 (Public Water Suppliers). However, the Entity must be up-to-date on its Annual Report Submittals to the TWDB.

Water Conservation Plans

5. For the five-year submittal (or for revisions between the five-year submittals), attach your updated or revised Water Conservation Plan for each of the uses indicated in Section 3, above. Every updated or revised water conservation plan submitted must contain each of the minimum requirements found in the TCEQ rules and must be duly adopted by the entity submitting the water conservation plan. Please include evidence that each water conservation plan submitted has been adopted.

- Rules on minimum requirements for Water Conservation Plans can be found in 30 TAC 288. http://texreg.sos.state.tx.us/public/readtac%24ext.ViewTAC?tac_view=4&ti=30&pt=1&ch=288
- Forms which include the minimum requirements and other useful information are also available to assist you. Visit the TCEQ webpage for Water Conservation Plans and Reports. https://www.tceq.texas.gov/permitting/water_rights/wr_technical-resources/conserve.html

*Call **512-239-4691** or email to **wcp@tceq.texas.gov** for assistance with the requirements for your water conservation plan(s) and report(s).*

6. For each Water Conservation Plan submitted, state whether the five and ten-year targets for water savings and water loss were met in your *previous* water conservation plan.
Yes_X___ No_____
If the targets were not met, please provide an explanation.

Due to the nature of the industrial use of the water (cooling of power generation processes & equipment), the targets amount to minimizing water losses from the process piping with ultimate goal being to utilize 100% of the diverted water and return all water not actually consumed by the process. Periodic inspection of the process piping for possible losses is the main activity to accomplish this goal since there is no water distribution system.

The City of Henderson has not exercised it's option to purchase water and therefore there has been no system of intake and delivery for that purpose designed and built. If the option is initiated, there would be a need for a conservation plan to be in place with targets and goals and updated as part of the plan to actually purchase water from the District.

7. For each five-year submittal, does each water conservation plan submitted contain *updated* five and ten-year targets for water savings and water loss?
Yes_____ No_X_____

If yes, please identify where in the water conservation plan the updated targets are located (page, section).

_____

_____

_____

_____

8. In the box below (or in an attachment titled "Summary of Updates or Revisions to Water Conservation Plans), please identify any other revisions/updates made to each water conservation plan that is being updated or revised. Please specify the water conservation plan being updated and the location within the plan of the newly adopted updates or revisions.

9. Form Completed by (Point of Contact): Stephen G. Bennett, PE, Stokes & Associates, Inc.
(If different than name listed above, owner and contact may be different individual(s)/entities)

Contact Person Title/Position: Project Engineer

Contact Address: 605 S. Main, Suite 200, Henderson, TX 75653

Contact Phone Number: (903) 657-7558 Contact Email Address: stephen@stokesandassociates.com

Signature: Stephen G. Bennett, P.E. Date: 4/25/2019

MONTHLY WATER DIVERTED BY USER & TOTALS 2014-2018

LUMINANT - 5,000 Ac-Ft / YR Allowable

Year	2013	2014	2015	2016	2017	2018
Month	Ac-Ft	Ac-Ft	Ac-Ft	Ac-Ft	Ac-Ft	Ac-Ft
Jan	42456.6	39707.1	39876.1	39544.8	40002.6	33728.1
Feb	36131.4	36131.4	36131.4	37421.8	35989.5	16087.1
Mar	39710.7	40002.6	20513.9	27920.4	20226.1	17809.4
Apr	37146.7	32546.4	14796.8	22767.2	38627.4	17234.9
May	35176.2	25797.9	31516.4	39509.7	39935.4	15221.2
Jun	39475.5	38712.2	40130.6	36687.7	37909.1	33837.6
Jul	45221.1	46406.3	49748.6	50221.8	42098.9	40575.8
Aug	46578.3	49511.5	53285.6	53285.6	34424.6	46062.1
Sep	45031.6	40617.5	44041.2	51566.7	21894.6	17259.9
Oct	30127.8	40000	22079.7	34190	25523.6	5361.3
Nov	38009.0	28476.7	34904.8	34413.5	25370.2	12992.4
Dec	40323.0	39536.9	39939.3	41439	23212.2	5935.2
Total	475387.9	457446.5	426964.4	468968.2	385214.2	262105

5 Yr Avg: 400139.66 Monthly Avg 33345.0
2013 Max Yr: 475387.90

SOUTHERN POWER - 6,721 Ac-Ft / YR Allowable

Year	2013*	2014	2015	2016	2017	2018
Month	Ac-Ft	Ac-Ft	Ac-Ft	Ac-Ft	Ac-Ft	Ac-Ft
Jan	19.8	19.80	4.4	1.358	4.849	0.77
Feb	32.89	32.89	38.91	8.249	0.632	0.61
Mar	20.67	20.67	0.72	15.101	7.467	0.5
Apr	512.57	12.57	0.76	3.19	5.159	0.12
May	5.35	4.92	0.62	5.898	3.298	1.17
Jun	107.86	107.86	0.97	5.098	12.362	1.07
Jul	111.27	111.27	1.79	3.873	3.739	0.43
Aug	35.54	35.55	78.87	7.275	2.745	0.15
Sep	0.76	0.76	31.29	2.194	9.079	0.13
Oct	1.51	1.52	0.87	2.044	7.142	0.26
Nov	20.59	20.60	3.21	6.637	1.888	0.28
Dec	0.95	0.95	44.34	2.867	3	0.57
Total	869.76	369.36	206.75	63.784	61.36	6.06

5 Yr Avg: 141.46 Monthly Avg 11.8
2013 Max Yr: 869.76

COMBINED TOTALS - 11,721 Ac-Ft / YR Allowable

Year	2013	2014	2015	2016	2017	2018
Month	Ac-Ft	Ac-Ft	Ac-Ft	Ac-Ft	Ac-Ft	Ac-Ft
Jan	42476.4	39726.9	39880.5	39546.2	40007.4	33728.9
Feb	36164.3	36164.3	36170.3	37430.0	35990.1	16087.7
Mar	39731.4	40023.3	20514.6	27935.5	20233.6	17809.9
Apr	37659.3	32559.0	14797.6	22770.4	38632.6	17235.0
May	35181.6	25802.8	31517.0	39515.6	39938.7	15222.4
Jun	39583.4	38820.1	40131.6	36692.8	37921.5	33838.7
Jul	45332.4	46517.6	49750.4	50225.7	42102.6	40576.2
Aug	46613.8	49547.0	53364.5	53292.9	34427.3	46062.3
Sep	45032.4	40618.3	44072.5	51568.9	21903.7	17260.0
Oct	30129.3	40001.5	22080.6	34192.0	25530.7	5361.6
Nov	38029.6	28497.3	34908.0	34420.1	25372.1	12992.7
Dec	40324.0	39537.9	39983.6	41441.9	23215.2	5935.8
Total	476257.66	457815.86	427171.15	469031.98	385275.56	262111.06

5 Yr Avg: 400281.12 Monthly Avg 33356.8
2013 Max Yr: 476257.66

MONTHLY WATER CONSUMPTION BY USER & TOTALS 2014-2018

LUMINANT - 5,000 Ac-Ft / YR Allowable

Year	2013	2014	2015	2016	2017	2018
Month	Ac-Ft	Ac-Ft	Ac-Ft	Ac-Ft	Ac-Ft	Ac-Ft
Jan	4.1	12.1	3.4	0	0.7	22.2
Feb	2.8	22.9	5.4	2	0	2.5
Mar	5.2	22.2	13.5	1.6	0.2	1.7
Apr	9.1	2.8	0	17.1	0	0.5
May	4.0	0	0.4	5.6	4.4	5.8
Jun	18.1	6.9	18.1	19.4	11.9	14.3
Jul	30.3	24.4	47.8	22.2	44.2	40.4
Aug	52.8	56.5	69	37.9	10.4	1.8
Sep	20.4	8.6	11.9	28.9	3.1	2.6
Oct	5.3	13.9	0.6	8.9	3.7	0
Nov	5.9	4.7	3.1	0.1	0	1.3
Dec	11.3	0.4	0.6	2.9	0.5	0
Total	169.3	175.4	173.8	146.6	79.1	93.1

5 Yr Avg: 133.60 Monthly Avg 11.1
2014 Max Yr: 175.40

SOUTHERN POWER - 6,721 Ac-Ft / YR Allowable

Year	2013*	2014	2015	2016	2017	2018
Month	Ac-Ft	Ac-Ft	Ac-Ft	Ac-Ft	Ac-Ft	Ac-Ft
Jan	15.1	15.09	0.79	0.8	30.32	36.7
Feb	28.39	28.42	32.12	44.22	1.79	22.07
Mar	15.97	16.00	-0.43	1.31	36.86	8.7
Apr	506.77	6.80	-0.76	2.03	39.02	2.25
May	2.65	2.20	-1.81	23.8	2.52	80.61
Jun	98.56	98.51	-0.3	26.9	41.58	73.39
Jul	100.87	100.86	1.43	23.91	2.01	89.41
Aug	28.84	28.89	68.66	83.61	17	64.56
Sep	-0.24	-0.22	31.24	1.7	25.97	1.89
Oct	0.41	0.39	-0.59	2.26	36.83	2.1
Nov	13.79	13.79	-0.26	34.42	2.38	2.83
Dec	0.95	0.95	38.85	3.35	1.71	15.86
Total	812.06	311.69	168.94	248.31	237.99	400.37

5 Yr Avg: 273.46 Monthly Avg 22.8
2013 Max Yr: 812.06

COMBINED TOTALS - 11,721 Ac-Ft / YR Allowable

Year	2013	2014	2015	2016	2017	2018
Month	Ac-Ft	Ac-Ft	Ac-Ft	Ac-Ft	Ac-Ft	Ac-Ft
Jan	19.2	27.2	4.2	0.8	31.0	58.9
Feb	31.2	51.3	37.5	46.2	1.8	24.6
Mar	21.2	38.2	13.1	2.9	37.1	10.4
Apr	515.9	9.6	-0.8	19.1	39.0	2.8
May	6.7	2.2	-1.4	29.4	6.9	86.4
Jun	116.7	105.4	17.8	46.3	53.5	87.7
Jul	131.2	125.3	49.2	46.1	46.2	129.8
Aug	81.6	85.4	137.7	121.5	27.4	66.4
Sep	20.2	8.4	43.1	30.6	29.1	4.5
Oct	5.7	14.3	0.0	11.2	40.5	2.1
Nov	19.7	18.5	2.8	34.5	2.4	4.1
Dec	12.3	1.4	39.5	6.3	2.2	15.9
Total	981.36	487.09	342.74	394.91	317.09	493.47

5 Yr Avg: 407.06 Monthly Avg 33.9
2013 Max Yr: 981.36

2016 East Texas Regional Population Growth Projections							
City	2010	2020	2030	2040	2050	2060	2070
Henderson	13712	15240	16987	18685	20509	22405	24370
2016 East Texas Regional Water Plan Projections (Ac-Ft)							
City	2010	2020	2030	2040	2050	2060	2070
Henderson	2808	3820	4184	4547	4961	5412	5885
2016 East Texas Regional Water Use Per Capita Per Day (gal)							
City	2010	2020	2030	2040	2050	2060	2070
Henderson	182.8	223.8	219.9	217.2	215.9	215.6	215.6

Note: Projections based on 2016 Region I Water Plan

APPENDIX A

1. Lake Striker Water Use Records 2013-2018
2. Excerpts from 1996 TWDB Volumetric Survey
3. Excerpts from 2016 ETEX Regional Water Plan
4. Legal Documents
5. TAC 30, Ch. 288

Lake Striker Water Use Records 2013-2018

2018

	Monthly Diverted Amount			Monthly Consumed Amount		
2018	LUMINANT	SOUTHERN	TOTAL	LUMINANT	SOUTHERN	TOTAL
JAN	33,728.10	0.77	**33,728.87**	22.20	36.70	**58.90**
FEB	16,087.10	0.61	**16,087.71**	2.50	22.07	**24.57**
MAR	17,809.40	0.5	**17,809.90**	1.70	8.70	**10.40**
APR	17,234.90	0.12	**17,235.02**	0.50	2.25	**2.75**
MAY	15,221.20	1.17	**15,222.37**	5.80	80.61	**86.41**
JUNE	33,837.60	1.07	**33,838.67**	14.30	73.39	**87.69**
JULY	40,575.80	0.43	**40,576.23**	40.40	89.41	**129.81**
AUG	46,062.10	0.15	**46,062.25**	1.80	64.56	**66.36**
SEPT	17,259.90	0.13	**17,260.03**	2.60	1.89	**4.49**
OCT	5,361.30	0.26	**5,361.56**	0.00	2.10	**2.10**
NOV	12,992.40	0.28	**12,992.68**	1.30	2.83	**4.13**
DEC	5,935.20	0.57	**5,935.77**	0.00	15.86	**15.86**
	262,105.00	6.06	**262,111.06**	93.10	400.37	**493.47**
			262,111.06			493.47

1 acre foot = 325851.431889 gallons (US, Liquid)

Date	Flow MGD
1/1/2018	0
1/2/2018	0
1/3/2018	0
1/4/2018	0
1/5/2018	0
1/6/2018	0
1/7/2018	0.1136
1/8/2018	0.1421
1/9/2018	0.1272
1/10/2018	0.1419
1/11/2018	0.1363
1/12/2018	0.1245
1/13/2018	0.124
1/14/2018	0.1281
1/15/2018	0.1408
1/16/2018	0.1255
1/17/2018	0.1355
1/18/2018	0.1358
1/19/2018	0.1433
1/20/2018	0.1841
1/21/2018	0.0073
1/22/2018	0.1138
1/23/2018	0.2292
1/24/2018	0
1/25/2018	0
1/26/2018	0
1/27/2018	0
1/28/2018	0
1/29/2018	0
1/30/2018	0.1023
1/31/2018	0.1747

	Monthly Diverted Amount			Monthly Consumed Amount		
2017	LUMINANT	SOUTHERN	TOTAL	LUMINANT	SOUTHERN	TOTAL
JAN	40,002.60	4.848835582	**40,007.45**	0.70	30.32	**31.02**
FEB	35,989.50	0.6321408535	**35,990.13**	0.00	1.79	**1.79**
MAR	20,226.10	7.466642122	**20,233.57**	0.20	36.86	**37.06**
APR	38,627.40	5.158535007	**38,632.56**	0.00	39.02	**39.02**
MAY	39,935.40	3.29793859	**39,938.70**	4.40	2.52	**6.92**
JUNE	37,909.10	12.36163371	**37,921.46**	11.90	41.58	**53.48**
JULY	42,098.90	3.739495654	**42,102.64**	44.20	2.01	**46.21**
AUG	34,424.60	2.744514593	**34,427.34**	10.40	17.00	**27.40**
SEPT	21,894.60	9.078714234	**21,903.68**	3.10	25.97	**29.07**
OCT	25,523.60	7.141880618	**25,530.74**	3.70	36.83	**40.53**
NOV	25,370.20	1.888222505	**25,372.09**	0.00	2.38	**2.38**
DEC	23,212.20	3.000189397	**23,215.20**	0.50	1.71	**2.21**
	385,214.20	61.36	**385,275.56**	79.10	237.98	**317.08**
			385,275.56			317.08

1 acre foot = 325851.431889 gallons (US, Liquid)

Southern Power

2017	Lake Stryker Intake Totals-Consumed		Angelina River Discharge-Diverted	
	Million Gallons	acre-feet	Million Gallons	acre-feet
1/31/2017	9,879,000	30.3	1,580,000	4.8
2/28/2017	583,000	1.8	205,984	0.6
3/31/2017	12,012,000	36.9	2,433,016	7.5
4/30/2017	12,716,000	39.0	1,680,916	5.2
5/31/2017	822,000	2.5	1,074,638	3.3
6/30/2017	13,548,700	41.6	4,028,056	12.4
7/31/2017	653,500	2.0	1,218,520	3.7
8/31/2017	5,538,300	17.0	894,304	2.7
9/30/2017	8,461,400	26.0	2,958,312	9.1
10/31/2017	12,000,200	36.8	2,327,192	7.1
11/30/2017	775,300	2.4	615,280	1.9
12/31/2017	556,800	1.7	977,616	3.0
	77,546,200	238	19,993,834	61

WSC/6 72/CO/12-31-2015/Water Use Report

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
REPORT OF SURFACE WATER USED FOR THE YEAR ENDING DECEMBER 31, 2015

for **Stryker Creek Steam Electric Station**

USE: 2 (Industrial) **TYPE:** 9 (Contract) **WATER RIGHT NO:** 72

B6 / A6568

TWDB ACCT#: 860800

OWNER: Luminant Generation Company LLC
Stryker Creek Steam Electric Station
ATTN: Director, Environmental Generation
1601 Bryan St., EP27-100B
Dallas TX 75201-3411

If you have a change in name, address or ownership, please indicate the changes on this form. NOTE: Changing ownership also requires documents such as deed(s) and in case of inheritance, will, probate order, and will inventory. Per Texas Legislature rules, a fee of $100.00 will be charged for each transfer for name change.

Instructions for completing the form are enclosed. 1 Acre-Foot = 325,851 Gallons

Month	Maximum Diversion Rate (Specify: [ ] CFS or [x] GPM)	Monthly Diverted Amount** (acre-feet)	Monthly Consumed Amount** (acre-feet)	Monthly Return Flow (acre-feet)
	(1) FROM Stryker Lake	(2) FROM Stryker Lake	(3) Forced Evaporation	(4) TO Stryker Lake
January	292,000	39,876.1	3.4	39,872.7
February	292,000	36,131.4	5.4	36,126.0
March	292,000	20,513.9	13.5	20,500.4
April	285,014	14,796.8	0.0	14,796.8
May	292,000	31,516.4	0.4	31,516.0
June	340,960	40,130.6	18.1	40,112.4
July	388,960	49,748.6	47.8	49,700.7
August	388,960	53,285.6	69.0	53,216.6
September	388,960	44,041.2	11.9	44,029.3
October	246,960	22,079.7	0.6	22,079.1
November	292,000	34,904.8	3.1	34,901.7
December	292,000	39,939.3	0.6	39,938.7
Total:		426,964.2	173.8	426,790.4

NOTES
(1) Maximum pump rate from Stryker Lake through plant condensers
(2) Total amount pumped from Lake Stryker through condensers
(3) Industrial cooling (forced evaporation) estimated by: 1 acre-foot/1,000 Megawatt-Hours Net Generation
(4) Water returned to lake calculated by Monthly Diverted Amount minus Monthly Consumed Amount.

**The Monthly Diverted Amount and Monthly Consumed Amount may be the same; if they are, record them under both the Monthly diverted Amount and the Monthly Consumed Amount columns.

For Irrigation Use Only: Indicate the number of acres irrigated, the months and the type of crops grown in the space below:
Crop: Months: Acres:
Crop: Months: Acres:

Effective September 1, 2013, a person who fails to file is liable for a penalty each day in an amount not to exceed: (1) $100 per day for a water right authorization of 5,000 acre-feet or less per year; or (2) $500 per day for a water right authorizing more than 5,000 acre-feet per year.

Return this form by March 1, 2016.

Signature: _____ Date: 2/25/16

Contact Name: Ryan M. Bayle / 214-875-8294
Print Name Telephone Number

Return this form by March 1, 2016 to:
Texas Commission on Environmental Quality - Water Rights Permitting MC 160 - P. O. Box 13087 - Austin, TX 78711-3087
Telephone: (512) 239-4691

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
REPORT OF SURFACE WATER USED FOR THE YEAR ENDING DECEMBER 31st, 20_____

for

TYPE **WATER RIGHT NO:**

USE:

TWDB ACCT#:

OWNER:

Southern 2015

If you have a change in name, address or ownership, please indicate the changes on this form. NOTE: Changing ownership also requires recorded documents such as deed(s) and in case of inheritance, will, probate order, and will inventory. Per Texas statutes, a fee of $100.00 will be charged for each transfer or name change.

_____

_____

_____

1 Acre-Foot = 325,851 Gallons

	Maximum Diversion Rate (Specify: ☐CFS or ☐GPM)	Monthly Diverted Amount (acre-feet)	Monthly Consumed Amount (acre-feet)	Monthly Return Flow (acre-feet)
January	1850	4.40	.79	3.61
February	1850	38.91	32.12	6.79
March	1850	.72	-.43	1.15
April	1850	.76	-.76	1.52
May	1850	.62	-1.81	2.43
June	1850	.97	-.30	1.27
July	1850	1.79	1.43	.36
August	1850	78.87	68.66	10.21
September	1850	31.29	31.24	.05
October	1850	.87	-.59	1.46
November	1850	3.21	-.26	3.47
December	1850	44.34	38.85	5.49
	Total:	206.75	168.94	37.81

Comments: The plant has one million gallon storage tank which accounts for more return flows in some months than water diverted.

Effective September 1, 2013, a person who fails to file is liable for a penalty each day in an amount not to exceed: (1) $100 per day for a water right authorization of 5,000 acre-feet or less per year; or (2) $500 per day for a water right authorizing more than 5,000 acre-feet per year.

Return this form each year by March 1st.

For Irrigation Use Only: Indicate the number of acres irrigated, the months and the type of crops grown in the space below:

Crop:_____ Months:_____ Acres:_____

Crop:_____ Months:_____ Acres:_____

Signature: _____ Date: _____

Contact Name: _____ / _____
Print Name Telephone Number

Return this form by March 1 to:
Texas Commission on Environmental Quality ♦ Water Rights Permitting MC 160 ♦ P.O. Box 13087 ♦ Austin TX 78711-3087
Forms may be submitted electronically to WUR@tceq.texas.gov Telephone (512) 239-4691

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
REPORT OF SURFACE WATER USED FOR THE YEAR ENDING DECEMBER 31, 2014

for **Stryker Creek Steam Electric Station**

USE: 2 (Industrial) **TYPE:** 9 (Contract) **WATER RIGHT NO:** 72

TWDB ACCT#: 860800 B6 / A6568

OWNER: Luminant Generation Company LLC
Stryker Creek Steam Electric Station
ATTN: Director, Environmental Generation
1601 Bryan St., EP27-100B
Dallas TX 75201-3411

If you have a change in name, address or ownership, please indicate the changes on this form. NOTE: Changing ownership also requires documents such as deed(s) and in case of inheritance, will, probate order, and will inventory. Per Texas Legislature rules, a fee of $100.00 will be charged for each transfer for name change.

Instructions for completing the form are enclosed. 1 Acre-Foot = 325,851 Gallons

Month	Maximum Diversion Rate (Specify: [ ] CFS or [x] GPM)	Monthly Diverted Amount** (acre-feet)	Monthly Consumed Amount** (acre-feet)	Monthly Return Flow (acre-feet)
	(1) FROM Stryker Lake	(2) FROM Stryker Lake	(3) Forced Evaporation	(4) TO Stryker Lake
January	292,000	39,707.1	12.1	39,695.0
February	292,000	36,131.4	22.9	36,108.5
March	292,000	40,002.6	22.2	39,980.4
April	292,000	32,546.4	2.8	32,543.7
May	340,960	25,797.9	0.0	25,797.9
June	292,000	38,712.2	6.9	38,705.3
July	340,960	46,406.3	24.4	46,381.9
August	388,960	49,511.5	56.5	49,454.9
September	388,960	40,617.5	8.6	40,608.8
October	292,000	40,000.0	13.9	39,986.2
November	292,000	28,476.7	4.7	28,472.0
December	292,000	39,536.9	0.4	39,536.4
	Total:	457,446.4	175.3	457,271.0

NOTES
(1) Maximum pump rate from Stryker Lake through plant condensers
(2) Total amount pumped from Lake Stryker through condensers
(3) Industrial cooling (forced evaporation) estimated by: 1 acre-foot/1.000 Megawatt-Hours Net Generation
(4) Water returned to lake calculated by Monthly Diverted Amount minus Monthly Consumed Amount.

**The Monthly Diverted Amount and Monthly Consumed Amount may be the same; if they are, record them under both the Monthly diverted Amount and the Monthly Consumed Amount columns.

For Irrigation Use Only: Indicate the number of acres irrigated, the months and the type of crops grown in the space below:
Crop: Months: Acres:
Crop: Months: Acres:

Effective September 1, 2013, a person who fails to file is liable for a penalty each day in an amount not to exceed: (1) $100 per day for a water right authorization of 5,000 acre-feet or less per year; or (2) $500 per day for a water right authorizing more than 5,000 acre-feet per year.

Return this form by March 1, 2015.

Signature: _____ Date: 2/27/15

Contact Name: Ryan M. Bayle / 214-875-8294
Print Name Telephone Number

Return this form by March 1, 2014 to:

Texas Commission on Environmental Quality - Water Rights Permitting MC 160 - P. O. Box 13087 - Austin, TX 78711-3087
Telephone: (512) 239-4691

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
REPORT OF SURFACE WATER USED FOR THE YEAR ENDING DECEMBER 31, 2013

for

TYPE: **WATER RIGHT NO:**

USE:

TWDB ACCT#:

OWNER:

Southern 2013

If you have a change in name, address or ownership, please indicate the changes on this form. NOTE: Changing ownership also requires recorded documents such as deed(s) and in case of inheritance, will, probate order, and will inventory. Per Texas statutes, a fee of $100.00 will be charged for each transfer or name change.

_____

_____

_____

Instructions for completing the form are enclosed. 1 Acre-Foot = 325,851 Gallons

	Maximum Diversion Rate (Specify: ☐CFS or ☐GPM)	Monthly Diverted Amount (acre-feet)	Monthly Consumed Amount (acre-feet)	Monthly Return Flow (acre-feet)
January	1850	19.8	15.1	4.7
February	1850	32.89	28.39	4.5
March	1850	20.67	15.97	4.7
April	1850	512.57	506.77	5.8
May	1850	5.35	2.65	2.7
June	1850	107.86	98.56	9.3
July	1850	111.27	100.87	10.4
August	1850	35.54	28.84	6.7
September	1850	.76	-.24	1.0
October	1850	1.51	.41	1.1
November	1850	20.59	13.79	6.8
December	1850	.95	.95	0.0
	Total:	869.76	812.06	57.7

Comments: _____

Effective September 1, 2013, a person who fails to file is liable for a penalty each day in an amount not to exceed: (1) $100 per day for a water right authorization of 5,000 acre-feet or less per year; or (2) $500 per day for a water right authorizing more than 5,000 acre-feet per year.

For Irrigation Use Only: Indicate the number of acres irrigated, the months and the type of crops grown in the space below:

Crop:_____ Months:_____ Acres:_____

Crop:_____ Months:_____ Acres:_____

Return this form by March 1, 2014.

Signature: _____ Date: _____

Contact Name: _____ / _____
Print Name Telephone Number

Return this form by March 1, 2014 to:
Texas Commission on Environmental Quality ♦ Water Rights Permitting MC 160 ♦ P.O. Box 13087 ♦ Austin TX 78711-3087
Forms may be submitted electronically to WUR@tceq.texas.gov Telephone (512) 239-4691

WSC/6 72/CO/12-31-2013/Water Use Report

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

REPORT OF SURFACE WATER USED FOR THE YEAR ENDING DECEMBER 31, 2013

for **Stryker Creek Steam Electric Station**

USE: 2 (Industrial) **TYPE:** 9 (Contract) **WATER RIGHT NO:** 72

TWDB ACCT#: 860800 B6 / A6568

OWNER: Luminant Generation Company LLC
Stryker Creek Steam Electric Station
ATTN: Director, Environmental Generation
1601 Bryan St., EP27-100B
Dallas TX 75201-3411

If you have a change in name, address or ownership, please indicate the changes on this form. NOTE: Changing ownership also requires documents such as deed(s) and in case of inheritance, will, probate order, and will inventory. Per Texas Legislature rules, a fee of $100.00 will be charged for each transfer for name change.

Instructions for completing the form are enclosed. 1 Acre-Foot = 325,851 Gallons

Month	Maximum Diversion Rate (Specify: [ ] CFS or [x] GPM)	Monthly Diverted Amount** (acre-feet)	Monthly Consumed Amount** (acre-feet)	Monthly Return Flow (acre-feet)
	(1) FROM Stryker Lake	(2) FROM Stryker Lake	(3) Forced Evaporation	(4) TO Stryker Lake
January	388,960	42,456.6	4.1	42,452.5
February	292,000	36,131.4	2.8	36,128.5
March	292,000	39,710.7	5.2	39,705.5
April	340,960	37,146.7	9.1	37,137.6
May	340,960	35,176.2	4.0	35,172.2
June	340,000	39,475.5	18.1	39,457.3
July	340,000	45,221.1	30.3	45,190.8
August	340,000	46,578.3	52.8	46,525.6
September	340,000	45,031.6	20.4	45,011.1
October	340,000	30,127.8	5.3	30,122.5
November	340,000	38,009.0	5.9	38,003.1
December	340,000	40,323.0	11.3	40,311.7
	Total:	475,387.8	169.4	475,218.4

NOTES
(1) Maximum pump rate from Stryker Lake through plant condensers
(2) Total amount pumped from Lake Stryker through condensers
(3) Industrial cooling (forced evaporation) estimated by: 1 acre-foot/1,000 Megawatt-Hours Net Generation
(4) Water returned to lake calculated by Monthly Diverted Amount minus Monthly Consumed Amount.

**The Monthly Diverted Amount and Monthly Consumed Amount may be the same; if they are, record them under both the Monthly diverted Amount and the Monthly Consumed Amount columns.

For Irrigation Use Only: Indicate the number of acres irrigated, the months and the type of crops grown in the space below:
Crop: Months: Acres:
Crop: Months: Acres:

Effective September 1, 2013, a person who fails to file is liable for a penalty each day in an amount not to exceed: (1) $100 per day for a water right authorization of 5,000 acre-feet or less per year; or (2) $500 per day for a water right authorizing more than 5,000 acre-feet per year.

Return this form by March 1, 2014

Signature: _____ Date: 2/27/14

Contact Name: Ryan M. Bayle / 214-875-8294
Print Name Telephone Number

Return this form by March 1, 2014 to:
Texas Commission on Environmental Quality - Water Rights Permitting MC 160 - P. O. Box 13087 - Austin, TX 78711-3087
Telephone: (512) 239-4691

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
REPORT OF SURFACE WATER USED FOR THE YEAR ENDING DECEMBER 31, 2014

for

TYPE: 6 WATER RIGHT NO: 4847

USE: 2 INDUSTRIAL

B 6 / A 155

TWDB ACCT#:

OWNER: ANGELINA-NACOGDOCHES COS WCID 1
1524 WOODBERRY DR
LUFKIN TX 75904-5354

If you have a change in name, address or ownership, please indicate the changes on this form. NOTE: Changing ownership also requires recorded documents such as deed(s) and in case of inheritance, will, probate order, and will inventory. Per Texas statutes, a fee of $100.00 will be charged for each transfer or name change.

Instructions for completing the form are enclosed. 1 Acre-Foot = 325,851 Gallons

Month	Maximum Diversion Rate (Specify: ☐ CFS or ☒GPM)	Monthly Diverted Amount (acre-feet)	Monthly Consumed Amount (acre-feet)	Monthly Return Flow (acre-feet)
January	293850	39726.90	27.20	39699.70
February	293850	36164.29	51.29	36113.00
March	293850	40023.27	20.47	40002.80
April	293850	37658.97	509.57	32549.50
May	342810	25803.25	2.65	25800.60
June	293850	38820.06	103.06	38717.00
July	342810	46517.57	125.27	46392.30
August	390810	49567.04	95.34	49461.60
September	390810	40618.26	8.36	40609.80
October	293850	40001.61	14.31	39987.30
November	293850	28497.29	19.49	28478.80
December	293850	39537.85	1.35	39536.40
	Total:	458316.16	967.36	457348.80

Comments:

Effective September 1, 2013, a person who fails to file is liable for a penalty each day in an amount not to exceed: (1) $100 per day for a water right authorization of 5,000 acre-feet or less per year; or (2) $500 per day for a water right authorizing more than 5,000 acre-feet per year.

Return this form by March 1, 2015.

For Irrigation Use Only: Indicate the number of acres irrigated, the months and the type of crops grown in the space below:

Crop: Months: Acres:

Crop: Months: Acres:

Signature: Date: 2-26-15

Contact Name: Becky Bowers / Samuel D. Griffin, Jr. (Print Name) 936-632-2075 (Telephone Number)

Return this form by March 1, 2015 to :

Texas Commission on Environmental Quality ★ Water Rights Permitting MC 160 ★ PO Box 13087 ★ Austin TX 78711-3087

Forms may be submitted electronically to WUR@tceq.texas.gov Telephone: (512) 239-4691

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
REPORT OF SURFACE WATER USED FOR THE YEAR ENDING DECEMBER 31, 2014

for

TYPE: 6 WATER RIGHT NO: 4847

USE: 1 MUNICIPAL/DOMESTIC

B 6 / A 155

TWDB ACCT#:

OWNER: ANGELINA-NACOGDOCHES COS WCID 1
1524 WOODBERRY DR
LUFKIN TX 75904-5354

If you have a change in name, address or ownership, please indicate the changes on this form. NOTE: Changing ownership also requires recorded documents such as deed(s) and in case of inheritance, will, probate order, and will inventory. Per Texas statutes, a fee of $100.00 will be charged for each transfer or name change.

Instructions for completing the form are enclosed. 1 Acre-Foot = 325,851 Gallons

Month	Maximum Diversion Rate (Specify: ☐ CFS or ☐ GPM)	Monthly Diverted Amount (acre-feet)	Monthly Consumed Amount (acre-feet)	Monthly Return Flow (acre-feet)
January				
February				
March				
April				
May				
June		No Diversion		
July				
August				
September	Water for municipal use is under an option contract to purchase water. No water sales to date nor has a contract for sales been executed to date.			
October				
November				
December				
	Total:			

Comments:

Effective September 1, 2013, a person who fails to file is liable for a penalty each day in an amount not to exceed: (1) $100 per day for a water right authorization of 5,000 acre-feet or less per year; or (2) $500 per day for a water right authorizing more than 5,000 acre-feet per year.

Return this form by March 1, 2015.

For Irrigation Use Only: Indicate the number of acres irrigated, the months and the type of crops grown in the space below:

Crop: Months: Acres:

Crop: Months: Acres:

Signature: Date: 2-26-15

Contact Name: Billy Powers / Samuel D Griffin Jr. , 936-632-2075
Print Name Telephone Number

Return this form by March 1, 2015 to :

Texas Commission on Environmental Quality ★ Water Rights Permitting MC 160 ★ PO Box 13087 ★ Austin TX 78711-3087

Forms may be submitted electronically to WUR@tceq.texas.gov Telephone: (512) 239-4691

Completed form is DUE TO TCEQ by: March 01, 2017

ADJ_4847_CO_20170301_Water Use Report 2016

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
REPORT OF SURFACE WATER USED FOR THE YEAR ENDING 2016

for
Certificate of Adjudication

WATER RIGHT NO:4847
B 6

WUR USE: INDUSTRIAL
AUTH USE: INDUSTRIAL, INDUSTRIAL - POWER GENERATION

I am reporting water used for the water right holder(s) listed below.
CN600627525 Angelina Nacogdoches Counties WCID 1
Additional water right holders may be listed on the back.
☐ Please check the box if you have a change in name, address or ownership and indicate the changes on the back of this form.

ANGELINA NACOGDOCHES COUNTIES WCID 1
1524 WOODBERRY DR
LUFKIN, TX 75904-5354

Instructions for completing the form are enclosed. 1 Acre-Foot = 325,851 Gallons

If you are receiving this Water Use Report form, you must complete, sign, and return this form to TCEQ. Even if your water use is zero, indicate that on this form, provide a reason or explanation in the comment field, and submit the form to TCEQ. Please coordinate your water use reporting with all holders of this Water Right in order to avoid duplicative reporting.

Complete the table below by entering the amount of water that you diverted and consumed (even if zero). **EXCLUDE GROUNDWATER and WATER THAT YOU PURCHASED UNDER A CONTRACT**.

USE: INDUSTRIAL

Month	Diverted Amount (acre-feet)	Consumed Amount (acre-feet)
Jan	39546.16	0.00
Feb	37,430.05	46.22
Mar	27,935.50	2.91
Apr	22,770.39	19.13
May	39,515.60	29.40
Jun	36,693.30	46.30
Jul	50,225.67	46.11
Aug	53,292.88	121.51
Sept	51,568.89	30.60
Oct	34,192.04	11.16
Nov	34,420.14	34.52
Dec	41,441.87	6.25
Total:	469,031.98	394.91

Maximum Diversion Rate (Specify ☐CFS or ☐GPM)

Please answer the following questions.

If you have a permitted on-channel impoundment or reservoir, what is the condition of your dam?

Good
(eg.,Good,Fair,Poor)

Do you have working low flow outlet(s) on your impoundment(s)? ☑Yes ☐No

Comments: _____

A water right holder who fails to file a completed form by the due date is liable for a penalty for each day past the due date in an amount not to exceed: (1) $100 per day for a water right authorization of 5,000 acre-feet or less per year; or (2) $500 per day for a water right authorizing more than 5,000 acre-feet per year.

Signature: _____ Date: 3/20/17

Contact Name: Becky Bowers / Samuel D. Griffin 936-632-2075
Print Name Telephone Number

Return completed form by March 01, 2017 to:

Texas Commission on Environmental Quality ★ Water Rights Permitting MC 160 ★ PO Box 13087 ★ Austin TX 78711-3087

Completed form is DUE TO TCEQ by: March 01, 2017

ADJ_4847_CO_20170301_Water Use Report 2016

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
REPORT OF SURFACE WATER USED FOR THE YEAR ENDING 2016

for
Certificate of Adjudication

WATER RIGHT NO:4847
B 6

WUR USE: MUNICIPAL/DOMESTIC
AUTH USE: MUNICIPAL/DOMESTIC

I am reporting water used for the water right holder(s) listed below.
CN600627525 Angelina Nacogdoches Counties WCID 1
Additional water right holders may be listed on the back.
☐ Please check the box if you have a change in name, address or ownership and indicate the changes on the back of this form.

ANGELINA NACOGDOCHES COUNTIES WCID 1
1524 WOODBERRY DR
LUFKIN, TX 75904-5354

Instructions for completing the form are enclosed. 1 Acre-Foot = 325,851 Gallons

If you are receiving this Water Use Report form, you must complete, sign, and return this form to TCEQ. Even if your water use is zero, indicate that on this form, provide a reason or explanation in the comment field, and submit the form to TCEQ. Please coordinate your water use reporting with all holders of this Water Right in order to avoid duplicative reporting.

Complete the table below by entering the amount of water that you diverted (even if zero). **EXCLUDE GROUNDWATER and WATER THAT YOU PURCHASED UNDER A CONTRACT**.

USE: MUNICIPAL/DOMESTIC

Month	Diverted Amount (acre-feet)
Jan	
Feb	
Mar	No Diversion
Apr	
May	
Jun	
Jul	
Aug	
Sept	Under option contract
Oct	for purchase. No water
Nov	sales to date nor a contract
Dec	for sales executed.
Total:	

Maximum Diversion Rate (Specify ☐CFS or ☐GPM)

Please answer the following questions.

If you have a permitted on-channel impoundment or reservoir, what is the condition of your dam?

(e.g. Good, Fair, Poor)

Do you have working low flow outlet(s) on your impoundment(s)? ☐Yes ☐No

Comments:

A water right holder who fails to file a completed form by the due date is liable for a penalty for each day past the due date in an amount not to exceed: (1) $100 per day for a water right authorization of 5,000 acre-feet or less per year; or (2) $500 per day for a water right authorizing more than 5,000 acre-feet per year.

Signature: _____ Date: 3/30/2017

Contact Name: Becky Bowers / Samuel D. Griffin (936) 632-2075
Print Name Telephone Number

Return completed form by March 01, 2017 to:

Completed form is DUE TO TCEQ by: March 01, 2017 ADJ_4847_CO_20170301_Water Use Report 2016

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
REPORT OF SURFACE WATER USED FOR THE YEAR ENDING 2016

for
Certificate of Adjudication

WATER RIGHT NO:4847
B 6

WUR USE: OTHER
AUTH USE: WATER QUALITY

I am reporting water used for the water right holder(s) listed below.
CN600627525 Angelina Nacogdoches Counties WCID 1
Additional water right holders may be listed on the back.
☐ Please check the box if you have a change in name, address or ownership and indicate the changes on the back of this form.

ANGELINA NACOGDOCHES COUNTIES WCID 1
1524 WOODBERRY DR
LUFKIN, TX 75904-5354

Instructions for completing the form are enclosed. 1 Acre-Foot = 325,851 Gallons

If you are receiving this Water Use Report form, you must complete, sign, and return this form to TCEQ. Even if your water use is zero, indicate that on this form, provide a reason or explanation in the comment field, and submit this form to TCEQ. Please coordinate your water use reporting with all owners of this Water Right in order to avoid duplicative reporting.

Please answer the following questions. When answering all questions below and completing the table on the right, **EXCLUDE GROUNDWATER and WATER THAT YOU PURCHASED UNDER A CONTRACT**.

1. If you have a permitted on-channel impoundment or reservior, what is the condition of your dam? _____ (e.g.,Good,Fair,Poor)
   Do you have working low flow outlet(s) on your impoundment(s)? ☐Yes ☐No

2. Did you divert any permitted water from a watercourse (i.e., a stream and/or on-channel reservoir)? ☐Yes ☐No (If No, skip to question 3 below) If Yes,
   Complete the Diverted Column in the table on the right by entering the total amount of water diverted (even if zero).
   Check all uses for which water was diverted:
   ☐Recreation ☐Instream ☐Wetlands ☐Public Parks ☐Game Preserves
   ☐Hydroelectric ☐Flood Control ☐Navigation ☐Water Quality ☐Other

3. Did you allow permitted water to remain in the watercourse under the terms of your permit?
   ☐Yes ☐No
   If Yes,
   Complete the Used Column in the table on the right by entering the total amount of water used (even if zero).
   Check all uses for which water was used:
   ☐Recreation ☐Instream ☐Wetlands ☐Public Parks ☐Game Preserves
   ☐Hydroelectric ☐Flood Control ☐Navigation ☐Water Quality ☐Other

Complete the Diverted column below if you answered 'Yes' to question 2.
Complete the Used column below if you answered 'Yes' to question 3.

Month	Diverted (acre-feet)	Used (acre-feet)
Jan		
Feb		
Mar		
Apr		
May	NO	
Jun		
Jul		
Aug	ASKED	
Sept		
Oct		
Nov		
Dec		
Total:		
Maximum Diversion Rate (Specify ☐CFS or ☐GPM)		

Comments: _____

A water right holder who fails to file a completed form by the due date is liable for a penalty for each day past the due date in an amount not to exceed: (1) $100 per day for a water right authorization of 5,000 acre-feet or less per year; or (2) $500 per day for a water right authorizing more than 5,000 acre-feet per year.

Signature: _____ Date: 3/30/17

Contact Name: Becky Bowers / Samuel D Griffin (936) 632-2075
Print Name Telephone Number

Return completed form by March 01, 2017 to:

2016 Water Usage		(Diverted)
	Lake Stryker Intake	Angelina River Discharge
January	260,900.00	442,588
February	14,407,000	2,687,860
March	424,900	4,920,640
April	661,000	1,039,316
May	7,754,950	1,921,824
June	8,764,450	1,661,220
July	7,788,500	1,262,132
August	27,244,500	2,370,608
September	553,100	714,976
October	733,900	665,908
November	11,182,000	2,162,808
December	1,091,000	934,232
TOTAL	80,866,200.00	20,784,112.00

	Max. Diversion Rate			Monthly Diverted Amount			Monthly Consumed Amount		
2016	LUMINANT	SOUTHERN	TOTAL	LUMINANT	SOUTHERN	TOTAL	LUMINANT	SOUTHERN	TOTAL
JAN	292,000	0	**292,000**	39,544.80	1.358250898	**39,546.16**	0.00	0.80	**0.80**
FEB	292,000	0	**292,000**	37,421.80	8.248728522	**37,430.05**	2.00	44.22	**46.22**
MAR	340,958	0	**340,958**	27,920.40	15.10086966	**27,935.50**	1.60	1.31	**2.91**
APR	340,958	0	**340,958**	22,767.20	3.18953946	**22,770.39**	17.10	2.03	**19.13**
MAY	340,960	1,850	**342,810**	39,509.70	5.897853475	**39,515.60**	5.60	23.80	**29.40**
JUNE	374,680	1,850	**376,530**	36,687.70	5.098090226	**36,692.80**	19.40	26.90	**46.30**
JULY	388,958	1,850	**390,808**	50,221.80	3.873335749	**50,225.67**	22.20	23.91	**46.11**
AUG	388,958	1,850	**390,808**	53,285.60	7.275119174	**53,292.88**	37.90	83.61	**121.51**
SEPT	388,958	1,850	**390,808**	51,566.70	2.194177868	**51,568.89**	28.90	1.70	**30.60**
OCT	388,958	1,850	**390,808**	34,190.00	2.043593905	**34,192.04**	8.90	2.26	**11.16**
NOV	388,960	1,850	**390,810**	34,413.50	6.637405235	**34,420.14**	0.10	34.42	**34.52**
DEC	388,960	1,850	**390,810**	41,439.00	2.867048933	**41,441.87**	2.90	3.35	**6.25**
				468,968.20	63.78	**469,031.98**	146.60	248.31	**394.91**
						469,031.98			394.91

Excerpts from 1996 TWDB Volumetric Survey

the lowest outlet in the dam, was calculated to be 5,931 based on the low flow outlet invert elevation of 282.0 feet. The conservation storage capacity, or the amount of water between the spillway and the lowest outlet, was determined to be 16,930 acre-feet.

LAKE KURTH RESULTS

Results from the 1996 TWDB survey indicate Lake Kurth encompasses 726 surface acres and contains a volume of 14,769 acre-feet at the conservation pool elevation of 197.5 feet. The shoreline at this elevation was calculated to be 10.5 miles. The lowest elevation encountered during the survey was 166.5 feet, or 31.0 feet of depth, and was found in the middle of the lake, about 755 feet from the dam. Since this is an off-channel, pumped facility, there is no dead storage in the lake. Therefore the conservation storage capacity is 14,769 acre-feet.

SUMMARY

Striker Creek Reservoir and Lake Kurth were formed in 1957 and 1961 respectively. Initial storage calculations for Striker Creek Reservoir estimated the volume at the conservation pool elevation of 293.0 feet to be 29,000 acre-feet with a surface area of 2,426 acres. For Lake Kurth, the estimated initial volume at the conservation pool elevation of 197.5 feet was 16,200 acre-ft with a surface area of 770 acres.

During the period of December 5-6, 1996 a hydrographic survey of Lake Kurth was performed by the Texas Water Development Board's Hydrographic Survey Program. The following week, December 9-10, 1996, a hydrographic survey was performed on Striker Creek Reservoir. The 1996 surveys used technological advances such as differential global positioning system and geographical information system technology to build models of the reservoir's bathemetry. These advances allowed a survey to be performed quickly and to collect significantly more data of the bathemetry of both Striker Creek Reservoir and Lake Kurth than previous survey methods.

Results indicate that Striker Creek Reservoir’s capacity at the conservation pool elevation of 293.0 feet was 22,865 acre-feet and the area was 1,920 acres. The estimated reduction in storage

capacity between 1957 and 1996 was 6,135 acre-ft or 157 acre-ft per year. The average annual deposition rate of sediment in the reservoir can be estimated at 0.864 acre-ft per square mile of drainage area.

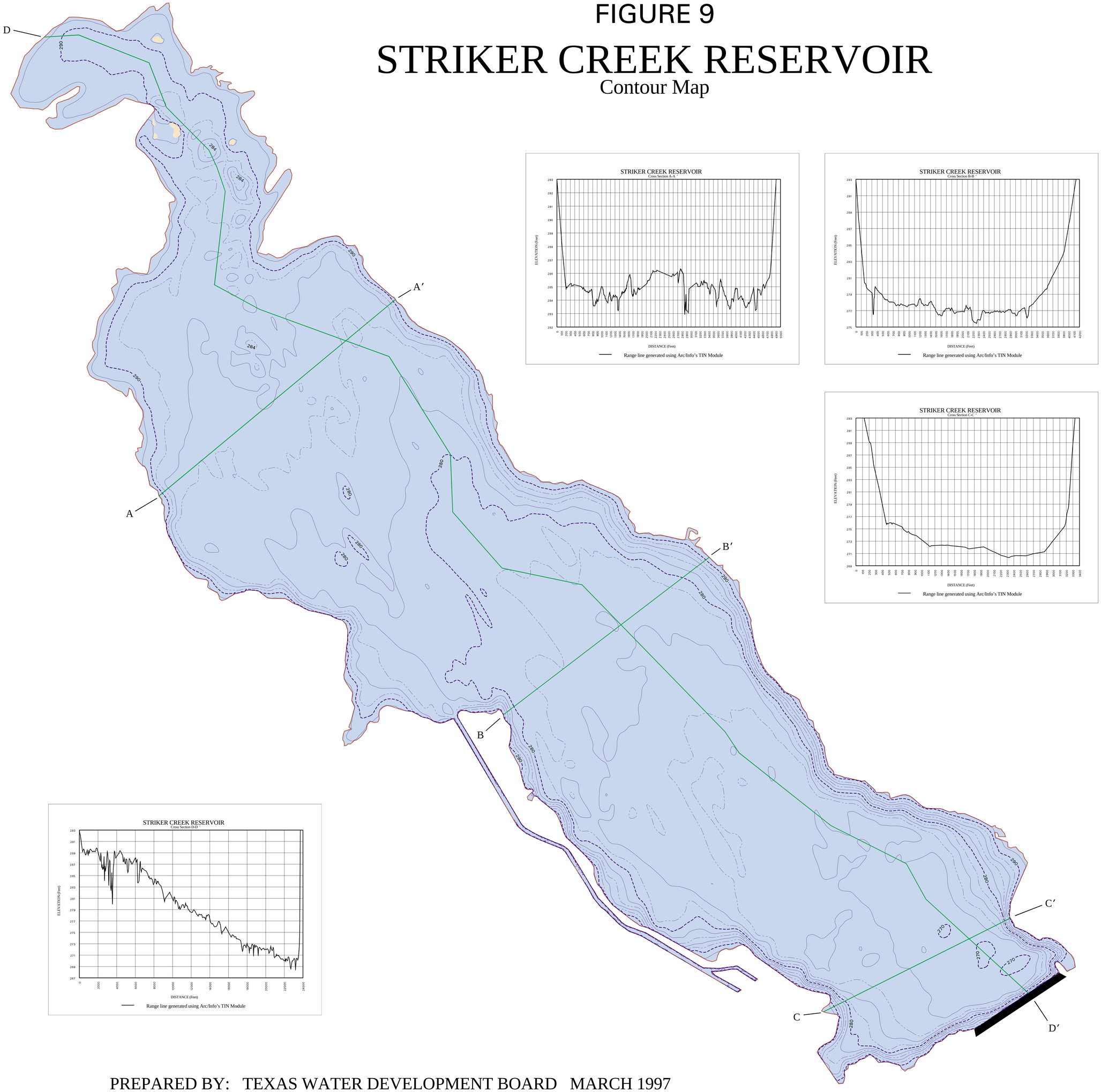
Results indicate that Lake Kurth's capacity at the conservation pool elevation of 197.5 feet was 14,769 acre-feet and the area was 726 acres. The estimated reduction in storage capacity between 1961 and 1996 was 1,431 acre-ft or 40.88 acre-ft per year.

It is difficult to compare the original design information and the surveys performed by the TWDB because of the different procedures, different data collection techniques, and the different ways the data were processed. Most of the reduction in storage in Lake Kurth can be attributed to the difference between the original estimate and the TWDB's survey because very little sediment is deposited in this off-channel lake from runoff. However, the TWDB considers the 1996 surveys to be a significant improvement over previous survey procedures and recommends that the same methodology be used in five to ten years or after major flood events to accurately monitor changes to each of the lake's storage capacities.

FIGURE 9

STRIKER CREEK RESERVOIR

Contour Map



N

1″=550′

NACOGDOCHES AND CHEROKEE COUNTIES

TEXAS WATER DEVELOPMENT BOARD

EXPLANATION

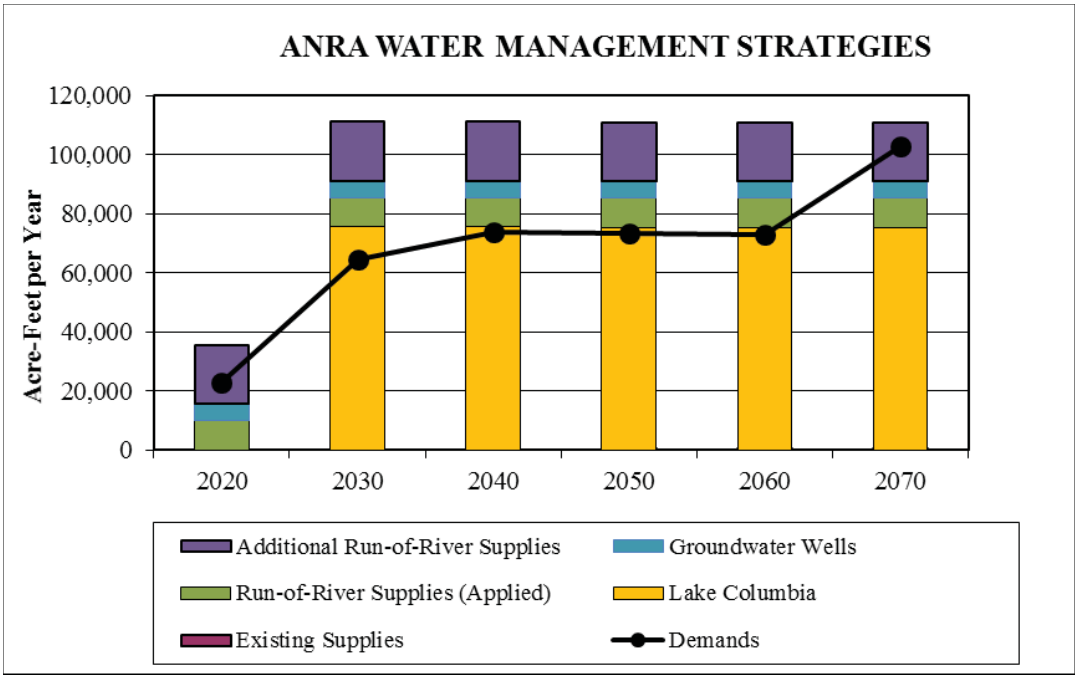
- Islands
- 10 Foot Contour Lines
- 2 Foot Contour Lines
- 2 Foot Contour Lines
- Normal Pool Elevation 293 Feet
- Cross Section Lines

This map is the product of a survey conducted by the Texas Water Development Board's Hydrographic Survey Program to determine the capacity of Striker Creek Reservoir. The Texas Water Development Board makes no representations or assumes any liability if this information is used for other purposes such as boating maps.

PREPARED BY: TEXAS WATER DEVELOPMENT BOARD MARCH 1997

Excerpts from 2016 ETEX Regional Water Plan

Strategy	Yield (ac-ft per year)	Capital cost	Annual Cost	Unit Cost ($/AF)	Unit Cost ($/1000 gal)
Lake Columbia Reservoir	75,600	$344,498,000	$25,161,000	$333	$1.02
ANRA Treatment Plant and Distribution System	22,232	$117,250,000	$41,859,000	$1,883	$5.78
Groundwater Wells (Cherokee/Rusk)	5,600	$26,023,000	$3,239,000	$578	$1.78
Run-of-River Supplies	30,000	0	0	0	0



5B.3.2 Angelina Nacogdoches WCID#1 (AN WCID#1). Angelina and Nacogdoches WCID#1 is a wholesale water provider to Steam Electric Power demands for Luminant and Nacogdoches Power in Cherokee and Nacogdoches counties respectively. In addition to these customers, Angelina Nacogdoches WCID#1 has a contract with Henderson in Rusk County for future use. The demand for the wholesale customers is supplied from Lake Striker. Angelina Nacogdoches WCID#1 owns a water

right for 20,600 ac-ft per year from Lake Striker. The entity's supplies are not sufficient to meet the contracted demands, and Angelina Nacogdoches WCID#1 has shortages beginning in 2020. Table below includes a summary of demands and supplies for Angelina Nacogdoches WCID#1. The following recommended strategies were proposed by Angelina Nacogdoches WCID#1 for inclusion in the 2016 regional plan.

Hydraulic Dredging Operation (Recommended). Angelina Nacogdoches WCID#1 believes that the volumetric survey will result in an additional yield that will address shortages in the first two decades. To address the shortages in the later decades, a second recommended strategy was proposed. The strategy is to conduct hydraulic dredging of Lake Striker to address the Lake sedimentation issues and increase Lake yield. The timing for the dredging operation is expected to be in 2040. Angelina Nacogdoches WCID#1 provided an estimate of the total cost for this strategy. Angelina Nacogdoches WCID#1 also plans to work with TWDB on the adjustment of the normal pool elevation of Lake Striker. The additional yield associated with the normal pool elevation adjustment is not clear at this point but it is assumed to yield an approximate amount of 3,500.

Internal studies conducted by Angelina Nacogdoches WCID#1 resulted in higher yield estimates for Lake Striker than those obtained from the Water Availability Model. Angelina Nacogdoches WCID#1 believes that the additional yield in Lake Striker is sufficient to meet the shortages manifested for this entity in this planning cycle. To address this inconsistency, Angelina Nacogdoches WCID #1 is considering to conduct volumetric survey of Lake Striker to determine the capacity of the lake and the resulting yield. Angelina Nacogdoches WCID#1 will coordinate with TWDB to schedule the volumetric survey. TWDB will charge a fee for conducting volumetric surveys. A cost estimate is not included for this strategy since this cost will be determined by Angelina Nacogdoches WCID#1 during their negotiations with TWDB.

A summary of the cost estimates for the recommended strategy is provided below. The demands for Angelina Nacogdoches WCID#1 also includes a contract with City of

Henderson for 8,280 acre-feet per year. While water management strategies are proposed to meet this demand, it was also noted that the contract for City of Henderson is a future demand and the supply to meet this contract is not required in the early decades of the planning cycles.

	2020	2030	2040	2050	2060	2070
Existing Supplies (ac-ft per year)						
Lake Striker	19,357	18,530	17,703	16,877	16,050	15,264
Demands (ac-ft per year)						
Demands	12,280	12,280	20,569	20,569	20,569	20,569
Surplus (Shortage)	**7,077**	**6,250**	**(2,866)**	**(3,692)**	**(4,519)**	**(5,305)**
Water Management Strategies (ac-ft per year)						
Hydraulic Dredging (Includes Volumetric Survey and Normal Pool Elevation Change)	0	0	5,600	5,600	5,600	5,600
Surplus or (Shortage) with WMS	**7,077**	**6,250**	**2,734**	**1,908**	**1,081**	**295**

Strategy	Yield (ac-ft per year)	Capital Cost	Annual Cost	Unit Cost ($/ac-ft)	Unit Cost ($/1000 gal)
Hydraulic Dredging Operations (Includes Volumetric Survey and Normal Pool Elevation Adjustment)	5,600	$23,716,000	-	$476	$1.46

Lake Striker (Angelina-Nacogdoches WCID)

The Angelina-Nacogdoches WCID adopted its most recent drought contingency plan in 2009. The triggers and actions are based on water elevations in the lake. These are outlined in Table 7.19 below.

Table 7.19 Lake Striker Triggers and Potential Actions

Drought Stage	Trigger	Potential Action
Mild	When the water level in Lake Striker Reservoir drops to 290.00 amsl.	Request that customers implement voluntary conservation measures and Stage 1 of their DCPs
Moderate	When the water level in Lake Striker Reservoir drops to 288.00 amsl.	Initiate pro-rata curtailment of diversions/deliveries and implement a surcharge if the situation dictates. Request that customers initiate mandatory conservation measures and Stage 2 of their DCPs.
Severe	When the water level in Lake Striker Reservoir drops to 286.00 amsl.	Initiate additional pro-rata curtailment of diversions/deliveries. Request that customers initiate additional mandatory conservation measures and Stage 3 of their DCPs.
Emergency	When the water level in Lake Striker Reservoir is at 284.00 amsl.	Initiate additional pro-rata curtailment of diversions/deliveries. Request that customers initiate additional mandatory conservation measures and additional stages of their DCPs.

Toledo Bend Reservoir (Sabine River Authority)

The SRA adopted its most recent drought contingency plan in 2014. The triggers and actions are based on water elevations in the reservoir and downstream flows in the Sabine River. These are outlined in Table 7.20 below.

The GM WSC purchases water from the SRA. Recommendations for aligning these DCPs are presented in Section 7.2.2.

Legal Documents

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

AMENDMENT TO A CERTIFICATE OF ADJUDICATION

CERTIFICATE NO. 06-4847B TYPE § 11.122

Owner:	Angelina-Nacogdoches Counties Water Control and Improvement District No. 1	Address:	1524 Woodberry Dr. Lufkin, TX 75901
Filed:	June 12, 2008	Granted:	August 14, 2015
Purpose:	Industrial and Municipal	Counties:	Cherokee, Angelina, Nacogdoches, Smith and Rusk
Watercourse:	Striker Creek, tributary of the Angelina River, tributary of the Neches River	Watershed:	Neches River Basin

WHEREAS, Certificate of Adjudication No. 06-4847 authorizes Angelina-Nacogdoches Counties Water Control and Improvement District (WCID) No. 1 (Owner) to maintain an existing dam and reservoir (Striker Creek Reservoir) on Striker Creek, tributary of the Angelina River, tributary of the Neches River, Neches River Basin, and impound therein not to exceed 26,960 acre-feet of water in Cherokee and Rusk Counties; and

WHEREAS, Certificate of Adjudication No. 06-4847 also authorizes the Owner to divert, circulate, and recirculate from the reservoir as much water as necessary to consumptively use up to 20,600 acre-feet of water per year for municipal and industrial purposes in the Owner's service area in Cherokee, Angelina, Nacogdoches, Smith and Rusk Counties within the Neches River Basin; and

WHEREAS, the Owner is authorized to divert anywhere on the perimeter of Striker Creek Reservoir at a maximum combined diversion rate of 861.42 cfs (387,639 gpm); and

WHEREAS, the time priority is December 5, 1955 for the impoundment of 26,500 acre-feet of water and the diversion and consumptive use of the first 15,000 acre-feet of water. The time priority is April 30, 1956 for the impoundment of the additional 460 acre-feet of water. The time priority is February 5, 1968 for the diversion and consumptive use of the remaining 5,600 acre-feet of water; and

WHEREAS, several special conditions apply; and

WHEREAS, Owner seeks to amend Certificate of Adjudication No. 06-4847 to authorize the diversion and consumptive use of an additional 2,324 acre-feet of water per year from Striker Creek Reservoir for industrial and municipal purposes in Cherokee, Angelina, Nacogdoches, Smith and Rusk Counties within the Neches River Basin, for a total diversion and consumptive use of 22,924 acre-feet of water per year; and

WHEREAS, Owner does not seek to increase the existing diversion rate; and

WHEREAS, Owner submitted an accounting plan, *Angelina-Nacogdoches Counties WCID No. 1 Striker Creek Reservoir Accounting Plan*, which was accepted by the Executive Director; and

WHEREAS, the Texas Commission on Environmental Quality (Commission) finds that jurisdiction over the application is established; and

WHEREAS, technical review of the application was completed prior to the adoption of environmental flow standards, and a draft amendment was prepared; however, Owner requested that the adopted environmental flow standards be applied to this application; and

WHEREAS, on April 20, 2011, the Commission adopted environmental flow standards for the Sabine and Neches Rivers and Sabine Lake Bay; and

WHEREAS , the Executive Director determined that sufficient unappropriated water was not available to grant the request for an additional 2,324 acre-feet of water per year on a perpetual basis; and

WHEREAS, the Executive Director determined that a reduced amount of 1,633 acre-feet of water per year was available on a perpetual basis; and

WHEREAS, the Executive Director recommends that special conditions should be included in the amendment; and

WHEREAS, no requests for a contested case hearing were received for this application; and

WHEREAS, the Commission has complied with the requirements of the Texas Water Code and Rules of the Texas Commission on Environmental Quality in issuing this amendment;

NOW, THEREFORE, this amendment to Certificate of Adjudication No. 06-4847, designated Certificate of Adjudication No. 06-4847B, is issued to the Angelina-

Nacogdoches Counties Water Control and Improvement District No. 1, subject to the following terms and conditions:

1. USE

In addition to the previous authorization to divert, circulate, and recirculate from the reservoir as much water as necessary to consumptively use up to 20,600 acre-feet of water per year for municipal and industrial purposes, Owner is also authorized to divert, circulate, and recirculate from Striker Creek Reservoir an additional 1,633 acre-feet of water per year for a total diversion and consumptive use of 22,233 acre-feet of water per year for industrial and municipal purposes in Cherokee, Angelina, Nacogdoches, Smith and Rusk Counties within the Neches River Basin.

2. DIVERSION

In addition to the previous authorization, Owner is also authorized to divert the additional 1,633 acre-feet of water per year anywhere on the perimeter of Striker Creek Reservoir at a maximum combined rate of 861.42 cfs (387,639 gpm).

3. PRIORITY DATE

The time priority is December 5, 1955 for the impoundment of 26,500 acre-feet of water and diversion and consumptive use of the first 15,000 acre-feet of water per year, April 30, 1956 for the impoundment of the additional 460 acre-feet of water, February 5, 1968 for the diversion and consumptive use of 5,600 acre-feet of water and June 12, 2008 for the diversion and consumptive use of 1,633 acre-feet of water per year.

4. CONSERVATION

Owner shall implement water conservation plans that provide for the utilization of those practices, techniques, and technologies that reduce or maintain the consumption of water, prevent or reduce the loss or waste of water, maintain or improve the efficiency in the use of water, increase the recycling and reuse of water, or prevent the pollution of water, so that a water supply is made available for future or alternative uses. Such plans shall include a requirement that in every wholesale water contract entered into, on or after the effective date of this amendment, including any contract extension or renewal, that each successive wholesale customer develop and implement conservation measures. If the customer intends to resell the water, then the contract for resale of the water must have water conservation requirements so that each successive wholesale customer in the resale of the water is required to implement water conservation measures.

5. SPECIAL CONDITIONS

A. Owner shall not divert the 1,633 acre-feet per year of additional water under this amendment unless streamflows exceed the following values at USGS Gage No. 08036500 - Angelina River near Alto, Texas, subject to Special Conditions B-E below:

Season	Subsistence	Base
Winter	55 cfs	277 cfs
Spring	18 cfs	90 cfs
Summer	11 cfs	40 cfs
Fall	16 cfs	52 cfs

B. The following periods of time apply to the different seasons: winter (January through March), spring (April through June), summer (July through September) and fall (October through December).

C. Owner shall not divert the 1,633 acre-feet per year of additional water authorized by this amendment if streamflow at USGS Gage No. 08036500 is equal to or below the applicable subsistence flow for a season.

D. If streamflow at USGS Gage No. 08036500 is greater than the applicable subsistence flow but less than the applicable base flow for a season, Owner may divert the 1,633 acre-feet per year of additional water authorized by this amendment as long as the flow at the measurement point does not fall below the applicable subsistence flow.

E. If streamflow at USGS Gage No. 08036500 is greater than the applicable base flow for a season, Owner may divert the 1,633 acre-feet per year of additional water authorized under this amendment unless streamflow falls below the applicable base flow.

F. Special Conditions A-E are subject to adjustment by the commission if the commission determines, through an expedited public review process, that such adjustment is appropriate to achieve compliance with applicable environmental flow standards adopted pursuant to Texas Water Code § 11.1471. Any adjustment shall be made in accordance with the provisions of the Texas Water Code § 11.1471(e-1).

G. Owner shall only divert and use water in accordance with the most recently approved *Angelina-Nacogdoches Counties WCID No. 1 Striker Creek Reservoir Accounting Plan.* Owner shall maintain the plan in electronic format and make the data available to the Executive Director and the public upon request. Any modifications to the accounting plan shall be approved by the Executive Director.

Any modification to the accounting plan that changes the terms of this amendment must be in the form of an amendment to the certificate. Should Owner fail to maintain the accounting plan or fail to notify the Executive Director of any modifications to the plan, Owner shall immediately cease diversion of the 1,633 acre-feet per year of additional water authorized under this amendment and either apply to amend the certificate or voluntarily forfeit this amendment. If Owner fails to amend the accounting plan or forfeit this amendment, the Commission may begin proceedings to cancel this amendment. Owner shall immediately notify the Executive Director upon modification of the accounting plan and provide copies of the appropriate documents effectuating such changes.

This amendment is issued subject to all terms, conditions and provisions contained in Certificate No. 06-4847, as amended, except as specifically amended herein.

This amendment is issued subject to all superior and senior water rights in the Neches River Basin.

Owner agrees to be bound by the terms, conditions and provisions contained herein and such agreement is a condition precedent to the granting of this amendment.

All other matters requested in the application which are not specifically granted by this amendment are denied.

This amendment is issued subject to the Rules of the Texas Commission on Environmental Quality and to the right of continuing supervision of State water resources exercised by the Commission.

For the Commission

ISSUED: August 14, 2015

Filed for Record in:
Official Public Records
Cherokee County

On: Sep 24,2015 at 03:17P

As a
Recordings

Document Number: 00647082

By,
Jennifer Boatman,
Deputy

STATE OF TEXAS COUNTY OF CHEROKEE
I hereby certify that this instrument was filed on the date and time stamped hereon by me and was duly recorded in the volume and page of the named records of:
Cherokee County
as stamped hereon by me.

Sep 24,2015

HONORABLE Laverne Lusk, COUNTY CLERK
Cherokee County

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

THE STATE OF TEXAS
COUNTY OF TRAVIS
I HEREBY CERTIFY THAT THIS IS A TRUE AND CORRECT COPY OF A TEXAS COMMISSION ON ENVIRONMENTAL QUALITY DOCUMENT, WHICH IS FILED IN THE PERMANENT RECORDS
AUG 19 2015
OF THE COMMISSION. GIVEN UNDER MY HAND AND THE SEAL OF OFFICE ON
Bridget C. Bohac
BRIDGET C. BOHAC, CHIEF CLERK
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

AMENDMENT TO A CERTIFICATE OF ADJUDICATION

CERTIFICATE NO. 06-4847B TYPE § 11.122

Owner:	Angelina-Nacogdoches Counties Water Control and Improvement District No. 1	Address:	1524 Woodberry Dr. Lufkin, TX 75901
Filed:	June 12, 2008	Granted:	August 14, 2015
Purpose:	Industrial and Municipal	Counties:	Cherokee, Angelina, Nacogdoches, Smith and Rusk
Watercourse:	Striker Creek, tributary of the Angelina River, tributary of the Neches River	Watershed:	Neches River Basin

WHEREAS, Certificate of Adjudication No. 06-4847 authorizes Angelina-Nacogdoches Counties Water Control and Improvement District (WCID) No. 1 (Owner) to maintain an existing dam and reservoir (Striker Creek Reservoir) on Striker Creek, tributary of the Angelina River, tributary of the Neches River, Neches River Basin, and impound therein not to exceed 26,960 acre-feet of water in Cherokee and Rusk Counties; and

WHEREAS, Certificate of Adjudication No. 06-4847 also authorizes the Owner to divert, circulate, and recirculate from the reservoir as much water as necessary to consumptively use up to 20,600 acre-feet of water per year for municipal and industrial purposes in the Owner's service area in Cherokee, Angelina, Nacogdoches, Smith and Rusk Counties within the Neches River Basin; and

WHEREAS, the Owner is authorized to divert anywhere on the perimeter of Striker Creek Reservoir at a maximum combined diversion rate of 861.42 cfs (387,639 gpm); and

WHEREAS, the time priority is December 5, 1955 for the impoundment of 26,500 acre-feet of water and the diversion and consumptive use of the first 15,000 acre-feet of water. The time priority is April 30, 1956 for the impoundment of the additional 460 acre-feet of water. The time priority is February 5, 1968 for the diversion and consumptive use of the remaining 5,600 acre-feet of water; and

WHEREAS, several special conditions apply; and

WHEREAS, Owner seeks to amend Certificate of Adjudication No. 06-4847 to authorize the diversion and consumptive use of an additional 2,324 acre-feet of water per year from Striker Creek Reservoir for industrial and municipal purposes in Cherokee, Angelina, Nacogdoches, Smith and Rusk Counties within the Neches River Basin, for a total diversion and consumptive use of 22,924 acre-feet of water per year; and

WHEREAS, Owner does not seek to increase the existing diversion rate; and

WHEREAS, Owner submitted an accounting plan, *Angelina-Nacogdoches Counties WCID No. 1 Striker Creek Reservoir Accounting Plan*, which was accepted by the Executive Director; and

WHEREAS, the Texas Commission on Environmental Quality (Commission) finds that jurisdiction over the application is established; and

WHEREAS, technical review of the application was completed prior to the adoption of environmental flow standards, and a draft amendment was prepared; however, Owner requested that the adopted environmental flow standards be applied to this application; and

WHEREAS, on April 20, 2011, the Commission adopted environmental flow standards for the Sabine and Neches Rivers and Sabine Lake Bay; and

WHEREAS , the Executive Director determined that sufficient unappropriated water was not available to grant the request for an additional 2,324 acre-feet of water per year on a perpetual basis; and

WHEREAS, the Executive Director determined that a reduced amount of 1,633 acre-feet of water per year was available on a perpetual basis; and

WHEREAS, the Executive Director recommends that special conditions should be included in the amendment; and

WHEREAS, no requests for a contested case hearing were received for this application; and

WHEREAS, the Commission has complied with the requirements of the Texas Water Code and Rules of the Texas Commission on Environmental Quality in issuing this amendment;

NOW, THEREFORE, this amendment to Certificate of Adjudication No. 06-4847, designated Certificate of Adjudication No. 06-4847B, is issued to the Angelina-

Nacogdoches Counties Water Control and Improvement District No. 1, subject to the following terms and conditions:

1. USE

In addition to the previous authorization to divert, circulate, and recirculate from the reservoir as much water as necessary to consumptively use up to 20,600 acre-feet of water per year for municipal and industrial purposes, Owner is also authorized to divert, circulate, and recirculate from Striker Creek Reservoir an additional 1,633 acre-feet of water per year for a total diversion and consumptive use of 22,233 acre-feet of water per year for industrial and municipal purposes in Cherokee, Angelina, Nacogdoches, Smith and Rusk Counties within the Neches River Basin.

2. DIVERSION

In addition to the previous authorization, Owner is also authorized to divert the additional 1,633 acre-feet of water per year anywhere on the perimeter of Striker Creek Reservoir at a maximum combined rate of 861.42 cfs (387,639 gpm).

3. PRIORITY DATE

The time priority is December 5, 1955 for the impoundment of 26,500 acre-feet of water and diversion and consumptive use of the first 15,000 acre-feet of water per year, April 30, 1956 for the impoundment of the additional 460 acre-feet of water, February 5, 1968 for the diversion and consumptive use of 5,600 acre-feet of water and June 12, 2008 for the diversion and consumptive use of 1,633 acre-feet of water per year.

4. CONSERVATION

Owner shall implement water conservation plans that provide for the utilization of those practices, techniques, and technologies that reduce or maintain the consumption of water, prevent or reduce the loss or waste of water, maintain or improve the efficiency in the use of water, increase the recycling and reuse of water, or prevent the pollution of water, so that a water supply is made available for future or alternative uses. Such plans shall include a requirement that in every wholesale water contract entered into, on or after the effective date of this amendment, including any contract extension or renewal, that each successive wholesale customer develop and implement conservation measures. If the customer intends to resell the water, then the contract for resale of the water must have water conservation requirements so that each successive wholesale customer in the resale of the water is required to implement water conservation measures.

5. SPECIAL CONDITIONS

A. Owner shall not divert the 1,633 acre-feet per year of additional water under this amendment unless streamflows exceed the following values at USGS Gage No. 08036500 - Angelina River near Alto, Texas, subject to Special Conditions B-E below:

Season	Subsistence	Base
Winter	55 cfs	277 cfs
Spring	18 cfs	90 cfs
Summer	11 cfs	40 cfs
Fall	16 cfs	52 cfs

B. The following periods of time apply to the different seasons: winter (January through March), spring (April through June), summer (July through September) and fall (October through December).

C. Owner shall not divert the 1,633 acre-feet per year of additional water authorized by this amendment if streamflow at USGS Gage No. 08036500 is equal to or below the applicable subsistence flow for a season.

D. If streamflow at USGS Gage No. 08036500 is greater than the applicable subsistence flow but less than the applicable base flow for a season, Owner may divert the 1,633 acre-feet per year of additional water authorized by this amendment as long as the flow at the measurement point does not fall below the applicable subsistence flow.

E. If streamflow at USGS Gage No. 08036500 is greater than the applicable base flow for a season, Owner may divert the 1,633 acre-feet per year of additional water authorized under this amendment unless streamflow falls below the applicable base flow.

F. Special Conditions A-E are subject to adjustment by the commission if the commission determines, through an expedited public review process, that such adjustment is appropriate to achieve compliance with applicable environmental flow standards adopted pursuant to Texas Water Code § 11.1471. Any adjustment shall be made in accordance with the provisions of the Texas Water Code § 11.1471(e-1).

G. Owner shall only divert and use water in accordance with the most recently approved *Angelina-Nacogdoches Counties WCID No. 1 Striker Creek Reservoir Accounting Plan*. Owner shall maintain the plan in electronic format and make the data available to the Executive Director and the public upon request. Any modifications to the accounting plan shall be approved by the Executive Director.

Any modification to the accounting plan that changes the terms of this amendment must be in the form of an amendment to the certificate. Should Owner fail to maintain the accounting plan or fail to notify the Executive Director of any modifications to the plan, Owner shall immediately cease diversion of the 1,633 acre-feet per year of additional water authorized under this amendment and either apply to amend the certificate or voluntarily forfeit this amendment. If Owner fails to amend the accounting plan or forfeit this amendment, the Commission may begin proceedings to cancel this amendment. Owner shall immediately notify the Executive Director upon modification of the accounting plan and provide copies of the appropriate documents effectuating such changes.

This amendment is issued subject to all terms, conditions and provisions contained in Certificate No. 06-4847, as amended, except as specifically amended herein.

This amendment is issued subject to all superior and senior water rights in the Neches River Basin.

Owner agrees to be bound by the terms, conditions and provisions contained herein and such agreement is a condition precedent to the granting of this amendment.

All other matters requested in the application which are not specifically granted by this amendment are denied.

This amendment is issued subject to the Rules of the Texas Commission on Environmental Quality and to the right of continuing supervision of State water resources exercised by the Commission.

R Q A. Hyde

For the Commission

ISSUED: August 14, 2015

STATE OF TEXAS COUNTY OF RUSK

I hereby certify that this instrument was filed on the date and time stamped hereon by me and was duly recorded in the volume and page of the named records of Rusk County, Texas as stamped hereon by me. OFFICIAL PUBLIC RECORDS

Sep 24,2015 02:13P

TRUDY MCGILL, COUNTY CLERK

RUSK COUNTY, TEXAS

FILED FOR RECORD

Sep 24,2015 02:13P

TRUDY MCGILL,
COUNTY CLERK
RUSK COUNTY, TEXAS

By:Esther Mawa, DEPUTY

ANGELINA AND NACOGDOCHES COUNTIES WATER CONTROL AND IMPROVEMENT DISTRICT #1
1524 Woodberry
Lufkin, TX 75904

May 25, 2018

Re: Lake Striker - Option Agreement for Water Purchase

Dear Sirs:

This letter agreement sets for the understanding between the City of Henderson, Texas (the "City") and the Angelina and Nacogdoches Counties Water Control and Improvement District No.1 (the "District") with respect to a right and option of the City to purchase untreated fresh water from Lake Striker that is available for sale by the District to the City to meet the municipal needs of the City. In consideration of the option payment and the covenants and agreements of parties set forth herein, the City and the District hereby agree as follows:

1. **Grant of Option.** Upon the terms and considerations set forth herein, the District hereby grants the City an option to purchase from the District up to seven million, four hundred thousand (7.4 million) gallons per day (representing a merger of the previously executed Option Agreements between the District and the City, entered into on April 12, 2011 and August 25, 2017) of the water available for sale (the "Option Amount"), subject to the rights of the existing customer(s) of the District and other commitments made to customers of the District. Such purchase shall be pursuant to the terms of one or more water supply agreements between the parties as described in paragraph 5 below.

2. **Option Payment.** In consideration for the Option herein granted by the District to the City, the City shall pay the District the total sum of $277,500.00 annually for each year of the option payment, shall be paid on or before **October 31st** of each year the Option is in effect.

3. **Term of Option.** The Option period granted herein shall be for a term of 10 years commencing as of the date hereof and terminating at 5:00 pm (Nacogdoches, Texas time) on the earlier of: (a) the date a Water Supply Agreement for the water under option is entered into, or (b) September 30, 2028. This option shall automatically renew for subsequent and successive ten-year terms at the end of the original Option Term (and each subsequent renewal of the Option Term), unless either party gives 90 day notice prior to renewal. In such notice from the District, the City shall be offered, and may reject a renewal offer of the Option at the then prevailing market rate offered to other similarly situated option purchasers, for the same Option Term and GPD agreed to herein

4. **Exercise of Option.** The City may exercise the option at any time during the term

of the Option by delivering written notice to the District of the City's desire to purchase the water under a Water Supply Agreement.

5. **Water Supply Agreement.** Upon notice given by the city of its desire to exercise this option, the District and the City will, in good faith, negotiate and document the terms of a Water Supply Agreement pursuant to which the District will sell and the City will purchase the Option Amount of water for its use, consistent with the basic terms set forth on Exhibit "A" attached hereto and incorporated herein as if copied herein verbatim. Upon the exercise of the Option by the City, the parties agree to execute the Water Supply Agreement.

6. **Supplied Water Payment.** City and District agree that any hereinafter executed Water Supply Agreement shall provide for (i) the monthly payment for water supplied (the "Supplied Water") and City (or its assignee) shall pay to the District, a Supplied Water fee of $0.48 per 1,000 Gallons ("KGal") and (ii) a minimum annual water supply payment to be hereinafter agreed upon between City and District. The Supplied Water fee may be adjusted annually upon provision of notice by District to City in accordance with the Water Supply Agreement.

District agrees that notwithstanding its right to adjust the Supplied Water fee, during the term of any Water Supply Agreement executed pursuant to this Option, City shall be entitled to pricing terms that are at least equally favorable to the pricing terms offered by District to any other wholesale water purchaser for water from Lake Striker. City shall have the right of reasonable inspection of any water supply agreements for the purchase and sale of wholesale water from Lake Striker. Notwithstanding anything in this paragraph to the contrary, the City's most favored nation provision applies solely to the price charged by District per 1,000 gallons of water for similar volumes of water and taking into account any differences in transportation costs due to the distance to respective points of delivery of water supply contracts. This provision does not apply to the current contract with Luminant or its' successors.

7. **Option Assignable.** The District agrees that the City may, with the written consent of the District, assign this Option in whole or part to one or more third parties up to, but not exceeding, the total Option Amount and Option Term agreed to herein.

8. **Effect of Partial or Temporary Assignment.** A partial or temporary assignment of this Option, including a partial or temporary assignment which results in entry by the District into a Water Purchase Agreement with an assignee of this option, shall not terminate or otherwise affect the City's unassigned or remainder interest in this Option.

9. **Representations and Warranties of the District.** The District hereby represents and warrants to the City that (a) the District has the authority to enter into this Agreement and all action necessary to authorize the District to execute this Agreement has been taken, (b) has been validly executed and delivered, and (c)the Agreement is enforceable against the District in accordance with its terms.

10. **Representations and Warranties of the City.** The City hereby represents and warrants to the District that this Agreement (a) has been duly authorized by the necessary boards and governing bodies of the City necessary for the authorization hereof, (b) has been validly executed and delivered, and (c) this Agreement is enforceable against the District in accordance with its terms.

11. **Notices.** Any notice, request or communications under this Agreement shall be given in writing to a party at its address set forth below and delivered personally, by facsimile (with confirmation of receipt), by overnight courier or mailed by certified or registered mail, postage prepaid, at or to the following addresses (or such other address for a party as specified by like notice):

If to the City of Henderson, Texas, address to:

The City of Henderson
Att'n: Tim Kelty, City Manager
400 West Main St.
Henderson, Texas 75652

If to the District, addressed to:

Angelina and Nacogdoches Counties
Water Control and Improvement District No. 1
Att'n: Samuel D. Griffin, Jr., President
1524 Woodberry
Lufkin, Texas 75904

Any notice hereunder delivered in person, by courier, or by facsimile shall be deemed received on the date hereof; any notice by registered or certified mail shall be deemed received two (2) days after the date of mailing; and any notice by overnight courier shall be deemed given one (1) day after shipment.

12. **Governing Law.** This Agreement shall be governed by, and construed in accordance with the Law of the State of Texas.

13. **Successors and Assigns.** All of the terms and conditions of this Agreement are hereby made binding on the successors and permitted assigns of both parties hereto.

14. **Severability.** If any provision of this Agreement is held to be illegal, invalid or unenforceable under present or future laws, such provision shall be fully severable, and this Agreement shall be construed and enforced as if such illegal, invalid or unenforceable provision had never comprised a part of this Agreement, and the remaining provisions of this Agreement shall remain in full force and effect and not be affected by the illegal, invalid or unenforceable provision or by its severance from this Agreement, provided that

both parties may still effectively realize the complete benefit of the transaction contemplated hereby

If this Agreement correctly reflects our current understanding, please sign one original and return it to the undersigned as soon as possible, retaining the other in your files.

Sincerely,

Samuel D. Griffin, Jr., President

Accepted and agreed by:
THE CITY OF HENDERSON, TEXAS

Patricia L. Brack

Pat Brack, Mayor

Stephanie Kimbrell

Stephanie Kimbrell, City Secretary

EXHIBIT "A"

Term. The initial term of the water supply agreement shall be ten (10) years.

Source. Water to be supplied by the District shall be from Lake Striker

Quantity and Delivery. The City, or whomever this option might be assigned to with written consent of the district, shall have the right to purchase up to a maximum of Seven Million Four Hundred Thousand (7.4 million) gallons per day of Water. The facility to remove the water from Lake Striker shall be built by the purchaser at such location and in accordance with the requirements of the District. Deliveries to the purchaser shall be metered or determined by mutually agreed upon release calculations.

Miscellaneous. To include other terms and conditions usual and customary for a transaction of this nature, including without limitation a representation by the District that it has the authority to execute, deliver and perform the water supply agreement.

TAC 30, Ch. 288

The following words and terms, when used in this chapter, shall have the following meanings, unless the context clearly indicates otherwise.

(1) Agricultural or Agriculture--Any of the following activities:
(A) cultivating the soil to produce crops for human food, animal feed, or planting seed or for the production of fibers;
(B) the practice of floriculture, viticulture, silviculture, and horticulture, including the cultivation of plants in containers or non-soil media by a nursery grower;
(C) raising, feeding, or keeping animals for breeding purposes or for the production of food or fiber, leather, pelts, or other tangible products having a commercial value;
(D) raising or keeping equine animals;
(E) wildlife management; and
(F) planting cover crops, including cover crops cultivated for transplantation, or leaving land idle for the purpose of participating in any governmental program or normal crop or livestock rotation procedure.
(2) Agricultural use--Any use or activity involving agriculture, including irrigation.
(3) Best management practices--Voluntary efficiency measures that save a quantifiable amount of water, either directly or indirectly, and that can be implemented within a specific time frame.
(4) 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 water supply is made available for future or alternative uses.
(5) Commercial use--The use of water by a place of business, such as a hotel, restaurant, or office building. This does not include multi-family residences or agricultural, industrial, or institutional users.
(6) Drought contingency plan--A strategy or combination of strategies for temporary supply and demand management responses to temporary and potentially recurring water supply shortages and other water supply emergencies. A drought contingency plan may be a separate document identified as such or may be contained within another water management document(s).
(7) Industrial use--The use of water in processes designed to convert materials of a lower order of value into forms having greater usability and commercial value, and the development of power by means other than hydroelectric, but does not include agricultural use.
(8) Institutional use--The use of water by an establishment dedicated to public service, such as a school, university, church, hospital, nursing home, prison, or government facility. All facilities dedicated to public service are considered institutional regardless of ownership.

(9) Irrigation--The agricultural use of water for the irrigation of crops, trees, and pastureland, including, but not limited to, golf courses and parks which do not receive water from a public water supplier.

(10) Irrigation water use efficiency--The percentage of that amount of irrigation water which is beneficially used by agriculture crops or other vegetation relative to the amount of water diverted from the source(s) of supply. Beneficial uses of water for irrigation purposes include, but are not limited to, evapotranspiration needs for vegetative maintenance and growth, salinity management, and leaching requirements associated with irrigation.

(11) Mining use--The use of water for mining processes including hydraulic use, drilling, washing sand and gravel, and oil field re-pressuring.

(12) Municipal use--The use of potable water provided by a public water supplier as well as the use of sewage effluent for residential, commercial, industrial, agricultural, institutional, and wholesale uses.

(13) Nursery grower--A person engaged in the practice of floriculture, viticulture, silviculture, and horticulture, including the cultivation of plants in containers or nonsoil media, who grows more than 50% of the products that the person either sells or leases, regardless of the variety sold, leased, or grown. For the purpose of this definition, grow means the actual cultivation or propagation of the product beyond the mere holding or maintaining of the item prior to sale or lease, and typically includes activities associated with the production or multiplying of stock such as the development of new plants from cuttings, grafts, plugs, or seedlings.

(14) Pollution--The alteration of the physical, thermal, chemical, or biological quality of, or the contamination of, any water in the state that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property, or to the public health, safety, or welfare, or impairs the usefulness or the public enjoyment of the water for any lawful or reasonable purpose.

(15) Public water supplier--An individual or entity that supplies water to the public for human consumption.

(16) Regional water planning group--A group established by the Texas Water Development Board to prepare a regional water plan under Texas Water Code, §16.053.

(17) Residential gallons per capita per day--The total gallons sold for residential use by a public water supplier divided by the residential population served and then divided by the number of days in the year.

(18) Residential use--The use of water that is billed to single and multi-family residences, which applies to indoor and outdoor uses.

(19) Retail public water supplier--An individual or entity that for compensation supplies water to the public for human consumption. The term does not include an individual or entity that supplies water to itself or its employees or tenants when that water is not resold to or used by others.

(20) Reuse--The authorized use for one or more beneficial purposes of use of water that remains unconsumed after the water is used for the original purpose of use and before that water is either disposed of or discharged or otherwise allowed to flow into a watercourse, lake, or other body of state-owned water.

(21) Total use--The volume of raw or potable water provided by a public water supplier to billed customer sectors or nonrevenue uses and the volume lost during conveyance, treatment, or transmission of that water.

(22) Total gallons per capita per day (GPCD)--The total amount of water diverted and/or pumped for potable use divided by the total permanent population divided by the days of the year. Diversion volumes of reuse as defined in this chapter shall be credited against total diversion volumes for the purposes of calculating GPCD for targets and goals.

(23) Water conservation coordinator--The person designated by a retail public water supplier that is responsible for implementing a water conservation plan.

(24) Water conservation plan--A strategy or combination of strategies for reducing the volume of water withdrawn from a water supply source, for reducing the loss or waste of water, for maintaining or improving the efficiency in the use of water, for increasing the recycling and reuse of water, and for preventing the pollution of water. A water conservation plan may be a separate document identified as such or may be contained within another water management document(s).

(25) Wholesale public water supplier--An individual or entity that for compensation supplies water to another for resale to the public for human consumption. The term does not include an individual or entity that supplies water to itself or its employees or tenants as an incident of that employee service or tenancy when that water is not resold to or used by others, or an individual or entity that conveys water to another individual or entity, but does not own the right to the water which is conveyed, whether or not for a delivery fee.

(26) Wholesale use--Water sold from one entity or public water supplier to other retail water purveyors for resale to individual customers.

RULE §288.2 Water Conservation Plans for Municipal Uses by Public Water Suppliers

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(a) A water conservation plan for municipal water use by public water suppliers must provide information in response to the following. If the plan does not provide information for each requirement, the public water supplier shall include in the plan an explanation of why the requirement is not applicable.

(1) Minimum requirements. All water conservation plans for municipal uses by public water suppliers must include the following elements:

(A) a utility profile in accordance with the Texas Water Use Methodology, including, but not limited to, information regarding population and customer data, water use data (including total gallons per capita per day (GPCD) and residential GPCD), water supply system data, and wastewater system data;

(B) a record management system which allows for the classification of water sales and uses into the most detailed level of water use data currently available to it, including, if possible, the sectors listed in clauses (i) - (vi) of this subparagraph. Any new billing system purchased by a public water supplier must be capable of reporting detailed water use data as described in clauses (i) - (vi) of this subparagraph:

(i) residential;

(I) single family;

(II) multi-family;

(ii) commercial;

(iii) institutional;

(iv) industrial;

(v) agricultural; and,

(vi) wholesale.

(C) specific, quantified five-year and ten-year targets for water savings to include goals for water loss programs and goals for municipal use in total GPCD and residential GPCD. The goals established by a public water supplier under this subparagraph are not enforceable;

(D) metering device(s), within an accuracy of plus or minus 5.0% in order to measure and account for the amount of water diverted from the source of supply;

(E) a program for universal metering of both customer and public uses of water, for meter testing and repair, and for periodic meter replacement;

(F) measures to determine and control water loss (for example, periodic visual inspections along distribution lines; annual or monthly audit of the water system to determine illegal connections; abandoned services; etc.);

(G) a program of continuing public education and information regarding water conservation;

(H) a water rate structure which is not "promotional," i.e., a rate structure which is cost-based and which does not encourage the excessive use of water;

(I) a reservoir systems operations plan, if applicable, providing for the coordinated operation of reservoirs owned by the applicant within a common watershed or river basin in order to optimize available water supplies; and

(J) a means of implementation and enforcement which shall be evidenced by:

(i) a copy of the ordinance, resolution, or tariff indicating official adoption of the water conservation plan by the water supplier; and

(ii) a description of the authority by which the water supplier will implement and enforce the conservation plan; and

(K) documentation of coordination with the regional water planning groups for the service area of the public water supplier in order to ensure consistency with the appropriate approved regional water plans.

(2) Additional content requirements. Water conservation plans for municipal uses by public drinking water suppliers serving a current population of 5,000 or more and/or a projected population of 5,000 or more within the next ten years subsequent to the effective date of the plan must include the following elements:

(A) a program of leak detection, repair, and water loss accounting for the water transmission, delivery, and distribution system;

(B) a requirement in every wholesale water supply contract entered into or renewed after official adoption of the plan (by either ordinance, resolution, or tariff), and including any contract extension, that each successive wholesale customer develop and implement a water conservation plan or water conservation measures using the applicable elements in this chapter. If the customer intends to resell the water, the contract between the initial supplier and customer must provide that the contract for the resale of the water must have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures in accordance with the provisions of this chapter.

(3) Additional conservation strategies. Any combination of the following strategies shall be selected by the water supplier, in addition to the minimum requirements in paragraphs (1) and (2) of this subsection, if they are necessary to achieve the stated water conservation goals of the plan. The commission may require that any of the following strategies be implemented by the

water supplier if the commission determines that the strategy is necessary to achieve the goals of the water conservation plan:

(A) conservation-oriented water rates and water rate structures such as uniform or increasing block rate schedules, and/or seasonal rates, but not flat rate or decreasing block rates;

(B) adoption of ordinances, plumbing codes, and/or rules requiring water-conserving plumbing fixtures to be installed in new structures and existing structures undergoing substantial modification or addition;

(C) a program for the replacement or retrofit of water-conserving plumbing fixtures in existing structures;

(D) reuse and/or recycling of wastewater and/or graywater;

(E) a program for pressure control and/or reduction in the distribution system and/or for customer connections;

(F) a program and/or ordinance(s) for landscape water management;

(G) a method for monitoring the effectiveness and efficiency of the water conservation plan; and

(H) any other water conservation practice, method, or technique which the water supplier shows to be appropriate for achieving the stated goal or goals of the water conservation plan.

(b) A water conservation plan prepared in accordance with 31 TAC §363.15 (relating to Required Water Conservation Plan) of the Texas Water Development Board and substantially meeting the requirements of this section and other applicable commission rules may be submitted to meet application requirements in accordance with a memorandum of understanding between the commission and the Texas Water Development Board.

(c) A public water supplier for municipal use shall review and update its water conservation plan, as appropriate, based on an assessment of previous five-year and ten-year targets and any other new or updated information. The public water supplier for municipal use shall review and update the next revision of its water conservation plan every five years to coincide with the regional water planning group.

RULE §288.3 Water Conservation Plans for Industrial or Mining Use

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(a) A water conservation plan for industrial or mining uses of water must provide information in response to each of the following elements. If the plan does not provide information for each requirement, the industrial or mining water user shall include in the plan an explanation of why the requirement is not applicable.

(1) a description of the use of the water in the production process, including how the water is diverted and transported from the source(s) of supply, how the water is utilized in the production process, and the estimated quantity of water consumed in the production process and therefore unavailable for reuse, discharge, or other means of disposal;

(2) specific, quantified five-year and ten-year targets for water savings and the basis for the development of such goals. The goals established by industrial or mining water users under this paragraph are not enforceable;

(3) a description of the device(s) and/or method(s) within an accuracy of plus or minus 5.0% to be used in order to measure and account for the amount of water diverted from the source of supply;

(4) leak-detection, repair, and accounting for water loss in the water distribution system;

(5) application of state-of-the-art equipment and/or process modifications to improve water use efficiency; and

(6) any other water conservation practice, method, or technique which the user shows to be appropriate for achieving the stated goal or goals of the water conservation plan.

(b) An industrial or mining water user shall review and update its water conservation plan, as appropriate, based on an assessment of previous five-year and ten-year targets and any other new or updated information. The industrial or mining water user shall review and update the next revision of its water conservation plan every five years to coincide with the regional water planning group.

RULE §288.4 Water Conservation Plans for Agricultural Use

(a) A water conservation plan for agricultural use of water must provide information in response to the following subsections. If the plan does not provide information for each requirement, the agricultural water user must include in the plan an explanation of why the requirement is not applicable.

(1) For an individual agricultural user other than irrigation:

(A) a description of the use of the water in the production process, including how the water is diverted and transported from the source(s) of supply, how the water is utilized in the production process, and the estimated quantity of water consumed in the production process and therefore unavailable for reuse, discharge, or other means of disposal;

(B) specific, quantified five-year and ten-year targets for water savings and the basis for the development of such goals. The goals established by agricultural water users under this subparagraph are not enforceable;

(C) a description of the device(s) and/or method(s) within an accuracy of plus or minus 5.0% to be used in order to measure and account for the amount of water diverted from the source of supply;

(D) leak-detection, repair, and accounting for water loss in the water distribution system;

(E) application of state-of-the-art equipment and/or process modifications to improve water use efficiency; and

(F) any other water conservation practice, method, or technique which the user shows to be appropriate for achieving the stated goal or goals of the water conservation plan.

(2) For an individual irrigation user:

(A) a description of the irrigation production process which shall include, but is not limited to, the type of crops and acreage of each crop to be irrigated, monthly irrigation diversions, any seasonal or annual crop rotation, and soil types of the land to be irrigated;

(B) a description of the irrigation method, or system, and equipment including pumps, flow rates, plans, and/or sketches of the system layout;

(C) a description of the device(s) and/or methods, within an accuracy of plus or minus 5.0%, to be used in order to measure and account for the amount of water diverted from the source of supply;

(D) specific, quantified five-year and ten-year targets for water savings including, where appropriate, quantitative goals for irrigation water use efficiency and a pollution abatement and prevention plan. The goals established by an individual irrigation water user under this subparagraph are not enforceable;

(E) water-conserving irrigation equipment and application system or method including, but not limited to, surge irrigation, low pressure sprinkler, drip irrigation, and nonleaking pipe;

(F) leak-detection, repair, and water-loss control;

(G) scheduling the timing and/or measuring the amount of water applied (for example, soil moisture monitoring);

(H) land improvements for retaining or reducing runoff, and increasing the infiltration of rain and irrigation water including, but not limited to, land leveling, furrow diking, terracing, and weed control;

(I) tailwater recovery and reuse; and

(J) any other water conservation practice, method, or technique which the user shows to be appropriate for preventing waste and achieving conservation.

(3) For a system providing agricultural water to more than one user:

(A) a system inventory for the supplier's:

(i) structural facilities including the supplier's water storage, conveyance, and delivery structures;

(ii) management practices, including the supplier's operating rules and regulations, water pricing policy, and a description of practices and/or devices used to account for water deliveries; and

(iii) a user profile including square miles of the service area, the number of customers taking delivery of water by the system, the types of crops, the types of irrigation systems, the types of drainage systems, and total acreage under irrigation, both historical and projected;

(B) specific, quantified five-year and ten-year targets for water savings including maximum allowable losses for the storage and distribution system. The goals established by a system providing agricultural water to more than one user under this subparagraph are not enforceable;

(C) a description of the practice(s) and/or device(s) which will be utilized to measure and account for the amount of water diverted from the source(s) of supply;

(D) a monitoring and record management program of water deliveries, sales, and losses;

(E) a leak-detection, repair, and water loss control program;

(F) a program to assist customers in the development of on-farm water conservation and pollution prevention plans and/or measures;

(G) a requirement in every wholesale water supply contract entered into or renewed after official adoption of the plan (by either ordinance, resolution, or tariff), and including any contract extension, that each successive wholesale customer develop and implement a water conservation plan or water conservation measures using the applicable elements in this chapter. If the customer intends to resell the water, the contract between the initial supplier and customer must provide that the contract for the resale of the water must have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures in accordance with applicable provisions of this chapter;

(H) official adoption of the water conservation plan and goals, by ordinance, rule, resolution, or tariff, indicating that the plan reflects official policy of the supplier;

(I) any other water conservation practice, method, or technique which the supplier shows to be appropriate for achieving conservation; and

(J) documentation of coordination with the regional water planning groups, in order to ensure consistency with appropriate approved regional water plans.

(b) A water conservation plan prepared in accordance with the rules of the United States Department of Agriculture Natural Resource Conservation Service, the Texas State Soil and Water Conservation Board, or other federal or state agency and substantially meeting the requirements of this section and other applicable commission rules may be submitted to meet application requirements in accordance with a memorandum of understanding between the commission and that agency.
(c) An agricultural water user shall review and update its water conservation plan, as appropriate, based on an assessment of previous five-year and ten-year targets and any other new or updated information. An agricultural water user shall review and update the next revision of its water conservation plan every five years to coincide with the regional water planning group.

RULE §288.5 Water Conservation Plans for Wholesale Water Suppliers

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A water conservation plan for a wholesale water supplier must provide information in response to each of the following paragraphs. If the plan does not provide information for each requirement, the wholesale water supplier shall include in the plan an explanation of why the requirement is not applicable.

(1) Minimum requirements. All water conservation plans for wholesale water suppliers must include the following elements:

(A) a description of the wholesaler's service area, including population and customer data, water use data, water supply system data, and wastewater data;

(B) specific, quantified five-year and ten-year targets for water savings including, where appropriate, target goals for municipal use in gallons per capita per day for the wholesaler's service area, maximum acceptable water loss, and the basis for the development of these goals. The goals established by wholesale water suppliers under this subparagraph are not enforceable;

(C) a description as to which practice(s) and/or device(s) will be utilized to measure and account for the amount of water diverted from the source(s) of supply;

(D) a monitoring and record management program for determining water deliveries, sales, and losses;

(E) a program of metering and leak detection and repair for the wholesaler's water storage, delivery, and distribution system;

(F) a requirement in every water supply contract entered into or renewed after official adoption of the water conservation plan, and including any contract extension, that each successive wholesale customer develop and implement a water conservation plan or water conservation measures using the applicable elements of this chapter. If the customer intends to resell the water, then the contract between the initial supplier and customer must provide that the contract for the resale of the water must have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures in accordance with applicable provisions of this chapter;

(G) a reservoir systems operations plan, if applicable, providing for the coordinated operation of reservoirs owned by the applicant within a common watershed or river basin. The

reservoir systems operations plans shall include optimization of water supplies as one of the significant goals of the plan;

(H) a means for implementation and enforcement, which shall be evidenced by a copy of the ordinance, rule, resolution, or tariff, indicating official adoption of the water conservation plan by the water supplier; and a description of the authority by which the water supplier will implement and enforce the conservation plan; and

(I) documentation of coordination with the regional water planning groups for the service area of the wholesale water supplier in order to ensure consistency with the appropriate approved regional water plans.

(2) Additional conservation strategies. Any combination of the following strategies shall be selected by the water wholesaler, in addition to the minimum requirements of paragraph (1) of this section, if they are necessary in order to achieve the stated water conservation goals of the plan. The commission may require by commission order that any of the following strategies be implemented by the water supplier if the commission determines that the strategies are necessary in order for the conservation plan to be achieved:

(A) conservation-oriented water rates and water rate structures such as uniform or increasing block rate schedules, and/or seasonal rates, but not flat rate or decreasing block rates;

(B) a program to assist agricultural customers in the development of conservation pollution prevention and abatement plans;

(C) a program for reuse and/or recycling of wastewater and/or graywater; and

(D) any other water conservation practice, method, or technique which the wholesaler shows to be appropriate for achieving the stated goal or goals of the water conservation plan.

(3) Review and update requirements. The wholesale water supplier shall review and update its water conservation plan, as appropriate, based on an assessment of previous five-year and ten-year targets and any other new or updated information. A wholesale water supplier shall review and update the next revision of its water conservation plan every five years to coincide with the regional water planning group.

RULE §288.6 Water Conservation Plans for Any Other Purpose or Use

A water conservation plan for any other purpose or use not covered in this subchapter shall provide information where applicable about those practices, techniques, and technologies that will be used to reduce the consumption of water, prevent or reduce the loss or waste of water, maintain or improve the efficiency in the use of water, increase the recycling and reuse of water, or prevent the pollution of water.

RULE §288.7 Plans Submitted with a Water Right Application for New or Additional State Water

(a) A water conservation plan submitted with an application for a new or additional appropriation of water must include data and information which:

(1) supports the applicant's proposed use of water with consideration of the water conservation goals of the water conservation plan;

(2) evaluates conservation as an alternative to the proposed appropriation; and

(3) evaluates any other feasible alternative to new water development including, but not limited to, waste prevention, recycling and reuse, water transfer and marketing, regionalization, and optimum water management practices and procedures.
(b) It shall be the burden of proof of the applicant to demonstrate that no feasible alternative to the proposed appropriation exists and that the requested amount of appropriation is necessary and reasonable for the proposed use.

SUBCHAPTER B	DROUGHT CONTINGENCY PLANS
RULE §288.20	Drought Contingency Plans for Municipal Uses by Public Water Suppliers

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(a) A drought contingency plan for a retail public water supplier, where applicable, must include the following minimum elements.
(1) Minimum requirements. Drought contingency plans must include the following minimum elements.
(A) Preparation of the plan shall include provisions to actively inform the public and affirmatively provide opportunity for public input. Such acts may include, but are not limited to, having a public meeting at a time and location convenient to the public and providing written notice to the public concerning the proposed plan and meeting.
(B) Provisions shall be made for a program of continuing public education and information regarding the drought contingency plan.
(C) The drought contingency plan must document coordination with the regional water planning groups for the service area of the retail public water supplier to ensure consistency with the appropriate approved regional water plans.
(D) The drought contingency plan must include a description of the information to be monitored by the water supplier, and specific criteria for the initiation and termination of drought response stages, accompanied by an explanation of the rationale or basis for such triggering criteria.
(E) The drought contingency plan must include drought or emergency response stages providing for the implementation of measures in response to at least the following situations:
(i) reduction in available water supply up to a repeat of the drought of record;
(ii) water production or distribution system limitations;
(iii) supply source contamination; or
(iv) system outage due to the failure or damage of major water system components (e.g., pumps).
(F) The drought contingency plan must include specific, quantified targets for water use reductions to be achieved during periods of water shortage and drought. The entity preparing the plan shall establish the targets. The goals established by the entity under this subparagraph are not enforceable.
(G) The drought contingency plan must include the specific water supply or water demand management measures to be implemented during each stage of the plan including, but not limited to, the following:
(i) curtailment of non-essential water uses; and
(ii) utilization of alternative water sources and/or alternative delivery mechanisms with the prior approval of the executive director as appropriate (e.g., interconnection with another water

system, temporary use of a non-municipal water supply, use of reclaimed water for non-potable purposes, etc.).

(H) The drought contingency plan must include the procedures to be followed for the initiation or termination of each drought response stage, including procedures for notification of the public.

(I) The drought contingency plan must include procedures for granting variances to the plan.

(J) The drought contingency plan must include procedures for the enforcement of mandatory water use restrictions, including specification of penalties (e.g., fines, water rate surcharges, discontinuation of service) for violations of such restrictions.

(2) Privately-owned water utilities. Privately-owned water utilities shall prepare a drought contingency plan in accordance with this section and incorporate such plan into their tariff.

(3) Wholesale water customers. Any water supplier that receives all or a portion of its water supply from another water supplier shall consult with that supplier and shall include in the drought contingency plan appropriate provisions for responding to reductions in that water supply.

(b) A wholesale or retail water supplier shall notify the executive director within five business days of the implementation of any mandatory provisions of the drought contingency plan.

(c) The retail public water supplier shall review and update, as appropriate, the drought contingency plan, at least every five years, based on new or updated information, such as the adoption or revision of the regional water plan.

RULE §288.21 Drought Contingency Plans for Irrigation Use

(a) A drought contingency plan for an irrigation use, where applicable, must include the following minimum elements.

(1) Minimum requirements. Drought contingency plans for irrigation water suppliers must include policies and procedures for the equitable and efficient allocation of water on a pro rata basis during times of shortage in accordance with Texas Water Code, §11.039. Such plans shall include the following elements as a minimum.

(A) Preparation of the plan shall include provisions to actively inform and to affirmatively provide opportunity for users of water from the irrigation system to provide input into the preparation of the plan and to remain informed of the plan. Such acts may include, but are not limited to, having a public meeting at a time and location convenient to the water users and providing written notice to the water users concerning the proposed plan and meeting.

(B) The drought contingency plan must document coordination with the regional water planning groups to ensure consistency with the appropriate approved regional water plans.

(C) The drought contingency plan must include water supply criteria and other considerations for determining when to initiate or terminate water allocation procedures, accompanied by an explanation of the rationale or basis for such triggering criteria.

(D) The drought contingency plan must include specific, quantified targets for water use reductions to be achieved during periods of water shortage and drought. The entity preparing the plan shall establish the targets. The goals established by the entity under this subparagraph are not enforceable.

(E) The drought contingency plan must include methods for determining the allocation of irrigation supplies to individual users.

(F) The drought contingency plan must include a description of the information to be monitored by the water supplier and the procedures to be followed for the initiation or termination of water allocation policies.

(G) The drought contingency plan must include procedures for use accounting during the implementation of water allocation policies.

(H) The drought contingency plan must include policies and procedures, if any, for the transfer of water allocations among individual users within the water supply system or to users outside the water supply system.

(I) The drought contingency plan must include procedures for the enforcement of water allocation policies, including specification of penalties for violations of such policies and for wasteful or excessive use of water.

(2) Wholesale water customers. Any irrigation water supplier that receives all or a portion of its water supply from another water supplier shall consult with that supplier and shall include in the drought contingency plan, appropriate provisions for responding to reductions in that water supply.

(3) Protection of public water supplies. Any irrigation water supplier that also provides or delivers water to a public water supplier(s) shall consult with that public water supplier(s) and shall include in the plan, mutually agreeable and appropriate provisions to ensure an uninterrupted supply of water necessary for essential uses relating to public health and safety. Nothing in this provision shall be construed as requiring the irrigation water supplier to transfer irrigation water supplies to non-irrigation use on a compulsory basis or without just compensation.

(b) Irrigation water users shall review and update, as appropriate, the drought contingency plan, at least every five years, based on new or updated information, such as adoption or revision of the regional water plan.

RULE §288.22 Drought Contingency Plans for Wholesale Water Suppliers

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(a) A drought contingency plan for a wholesale water supplier must include the following minimum elements.

(1) Preparation of the plan shall include provisions to actively inform the public and to affirmatively provide opportunity for user input in the preparation of the plan and for informing wholesale customers about the plan. Such acts may include, but are not limited to, having a public meeting at a time and location convenient to the public and providing written notice to the public concerning the proposed plan and meeting.

(2) The drought contingency plan must document coordination with the regional water planning groups for the service area of the wholesale public water supplier to ensure consistency with the appropriate approved regional water plans.

(3) The drought contingency plan must include a description of the information to be monitored by the water supplier and specific criteria for the initiation and termination of drought response stages, accompanied by an explanation of the rationale or basis for such triggering criteria.

(4) The drought contingency plan must include a minimum of three drought or emergency response stages providing for the implementation of measures in response to water supply conditions during a repeat of the drought-of-record.

(5) The drought contingency plan must include the procedures to be followed for the initiation or termination of drought response stages, including procedures for notification of wholesale customers regarding the initiation or termination of drought response stages.

(6) The drought contingency plan must include specific, quantified targets for water use reductions to be achieved during periods of water shortage and drought. The entity preparing the plan shall establish the targets. The goals established by the entity under this paragraph are not enforceable.

(7) The drought contingency plan must include the specific water supply or water demand management measures to be implemented during each stage of the plan including, but not limited to, the following:

(A) pro rata curtailment of water deliveries to or diversions by wholesale water customers as provided in Texas Water Code, §11.039; and

(B) utilization of alternative water sources with the prior approval of the executive director as appropriate (e.g., interconnection with another water system, temporary use of a non-municipal water supply, use of reclaimed water for non-potable purposes, etc.).

(8) The drought contingency plan must include a provision in every wholesale water contract entered into or renewed after adoption of the plan, including contract extensions, that in case of a shortage of water resulting from drought, the water to be distributed shall be divided in accordance with Texas Water Code, §11.039.

(9) The drought contingency plan must include procedures for granting variances to the plan.

(10) The drought contingency plan must include procedures for the enforcement of any mandatory water use restrictions including specification of penalties (e.g., liquidated damages, water rate surcharges, discontinuation of service) for violations of such restrictions.

(b) The wholesale public water supplier shall notify the executive director within five business days of the implementation of any mandatory provisions of the drought contingency plan.

(c) The wholesale public water supplier shall review and update, as appropriate, the drought contingency plan, at least every five years, based on new or updated information, such as adoption or revision of the regional water plan.

SUBCHAPTER C REQUIRED SUBMITTALS

RULE §288.30 Required Submittals

In addition to the water conservation and drought contingency plans required to be submitted with an application under §295.9 of this title (relating to Water Conservation and Drought Contingency Plans), water conservation and drought contingency plans are required as follows.

(1) Water conservation plans for municipal, industrial, and other non-irrigation uses. The holder of an existing permit, certified filing, or certificate of adjudication for the appropriation of surface water in the amount of 1,000 acre-feet a year or more for municipal, industrial, and other non-irrigation uses shall develop, submit, and implement a water conservation plan meeting the requirements of Subchapter A of this chapter (relating to Water Conservation Plans). The water conservation plan must be submitted to the executive director not later than May 1, 2005. Thereafter, the next revision of the water conservation plan for municipal, industrial, and other non-irrigation uses must be submitted not later than May 1, 2009, and every five years after that date to coincide with the regional water planning group. Any revised

plans must be submitted to the executive director within 90 days of adoption. The revised plans must include implementation reports. The requirement for a water conservation plan under this section must not result in the need for an amendment to an existing permit, certified filing, or certificate of adjudication.

(2) Implementation report for municipal, industrial, and other non-irrigation uses. The implementation report must include:

(A) the list of dates and descriptions of the conservation measures implemented;

(B) data about whether or not targets in the plans are being met;

(C) the actual amount of water saved; and

(D) if the targets are not being met, an explanation as to why any of the targets are not being met, including any progress on that particular target.

(3) Water conservation plans for irrigation uses. The holder of an existing permit, certified filing, or certificate of adjudication for the appropriation of surface water in the amount of 10,000 acre-feet a year or more for irrigation uses shall develop, submit, and implement a water conservation plan meeting the requirements of Subchapter A of this chapter. The water conservation plan must be submitted to the executive director not later than May 1, 2005. Thereafter, the next revision of the water conservation plan for irrigation uses must be submitted not later than May 1, 2009, and every five years after that date to coincide with the regional water planning group. Any revised plans must be submitted to the executive director within 90 days of adoption. The revised plans must include implementation reports. The requirement for a water conservation plan under this section must not result in the need for an amendment to an existing permit, certified filing, or certificate of adjudication.

(4) Implementation report for irrigation uses. The implementation report must include:

(A) the list of dates and descriptions of the conservation measures implemented;

(B) data about whether or not targets in the plans are being met;

(C) the actual amount of water saved; and

(D) if the targets are not being met, an explanation as to why any of the targets are not being met, including any progress on that particular target.

(5) Drought contingency plans for retail public water suppliers. Retail public water suppliers shall submit a drought contingency plan meeting the requirements of Subchapter B of this chapter (relating to Drought Contingency Plans) to the executive director after adoption by its governing body. The retail public water system shall provide a copy of the plan to the regional water planning group for each region within which the water system operates. These drought contingency plans must be submitted as follows.

(A) For retail public water suppliers providing water service to 3,300 or more connections, the drought contingency plan must be submitted to the executive director not later than May 1, 2005. Thereafter, the retail public water suppliers providing water service to 3,300 or more connections shall submit the next revision of the plan not later than May 1, 2009, and every five years after that date to coincide with the regional water planning group. Any revised plans must be submitted to the executive director within 90 days of adoption by the community water system. Any new retail public water suppliers providing water service to 3,300 or more connections shall prepare and adopt a drought contingency plan within 180 days of commencement of operation, and submit the plan to the executive director within 90 days of adoption.

(B) For all the retail public water suppliers, the drought contingency plan must be prepared and adopted not later than May 1, 2005, and must be available for inspection by the executive

director upon request. Thereafter, the retail public water suppliers shall prepare and adopt the next revision of the plan not later than May 1, 2009, and every five years after that date to coincide with the regional water planning group. Any new retail public water supplier providing water service to less than 3,300 connections shall prepare and adopt a drought contingency plan within 180 days of commencement of operation, and shall make the plan available for inspection by the executive director upon request.

(6) Drought contingency plans for wholesale public water suppliers. Wholesale public water suppliers shall submit a drought contingency plan meeting the requirements of Subchapter B of this chapter to the executive director not later than May 1, 2005, after adoption of the drought contingency plan by the governing body of the water supplier. Thereafter, the wholesale public water suppliers shall submit the next revision of the plan not later than May 1, 2009, and every five years after that date to coincide with the regional water planning group. Any new or revised plans must be submitted to the executive director within 90 days of adoption by the governing body of the wholesale public water supplier. Wholesale public water suppliers shall also provide a copy of the drought contingency plan to the regional water planning group for each region within which the wholesale water supplier operates.

(7) Drought contingency plans for irrigation districts. Irrigation districts shall submit a drought contingency plan meeting the requirements of Subchapter B of this chapter to the executive director not later than May 1, 2005, after adoption by the governing body of the irrigation district. Thereafter, the irrigation districts shall submit the next revision of the plan not later than May 1, 2009, and every five years after that date to coincide with the regional water planning group. Any new or revised plans must be submitted to the executive director within 90 days of adoption by the governing body of the irrigation district. Irrigation districts shall also provide a copy of the plan to the regional water planning group for each region within which the irrigation district operates.

(8) Additional submissions with a water right application for state water. A water conservation plan or drought contingency plan required to be submitted with an application in accordance with §295.9 of this title must also be subject to review and approval by the commission.

(9) Existing permits. The holder of an existing permit, certified filing, or certificate of adjudication shall not be subject to enforcement actions nor shall the permit, certified filing, or certificate of adjudication be subject to cancellation, either in part or in whole, based on the nonattainment of goals contained within a water conservation plan submitted with an application in accordance with §295.9 of this title or by the holder of an existing permit, certified filing, or certificate of adjudication in accordance with the requirements of this section.

(10) Submissions to the executive administrator of the Texas Water Development Board.

(A) Water conservation plans for retail public water suppliers. For retail public water suppliers providing water service to 3,300 or more connections, a water conservation plan meeting the minimum requirements of Subchapter A of this chapter and using appropriate best management practices must be developed, implemented, and submitted to the executive administrator of the Texas Water Development Board not later than May 1, 2009, and every five years after that date to coincide with the regional water planning group. Any revised plans must be submitted to the executive administrator within 90 days of adoption by the community water system. Any new retail public water suppliers providing water service to 3,300 or more connections shall prepare and adopt a water conservation plan within 180 days of

commencement of operation, and submit the plan to the executive administrator of the Texas Water Development Board within 90 days of adoption.

(B) Water conservation coordinators for retail public water suppliers. Retail public water suppliers that provide potable water to 3,300 or more connections shall designate a person as the water conservation coordinator responsible for implementing the water conservation plan; and identify, in writing, the water conservation coordinator, including the contact information for that person, to the executive administrator of the Texas Water Development Board. Notification of the initial designated water conservation coordinator shall be provided as specified by the Texas Water Development Board and any changes to the water conservation coordinator shall be provided within 90 days of the effective date of the change.

(C) Water conservation plans. Each entity that is required to submit a water conservation plan to the commission shall submit a copy of the plan to the executive administrator of the Texas Water Development Board not later than May 1, 2009, and every five years after that date to coincide with the regional water planning group.

(D) Annual reports. Each entity that is required to submit a water conservation plan to the Texas Water Development Board or the commission, shall file a report not later than May 1, 2010, and annually thereafter to the executive administrator of the Texas Water Development Board on the entity's progress in implementing the plan.

(E) Violations of the Texas Water Development Board's rules. The water conservation plans and annual reports shall comply with the minimum requirements established in the Texas Water Development Board's rules. The Texas Water Development Board shall notify the commission if the Texas Water Development Board determines that an entity has not complied with the Texas Water Development Board rules relating to the minimum requirements for water conservation plans or submission of plans or annual reports. The commission shall take appropriate enforcement action upon receipt of notice from the Texas Water Development Board.