RESOLUTION OF CITY COUNCIL OF THE CITY OF NACOGDOCHES, TEXAS, APPROVING 2019 EDITION OF THE WATER CONSERVATION PLAN FOR MUNICIPAL USE BY RETAIL PUBLIC SUPPLIERS AND WATER CONSERVATION PLAN FOR WHOLESALE PUBLIC WATER SUPPLIERS IN ACCORDANCE WITH RULES PROMULGATED BY TEXAS COMMISSION ON ENVIRONMENTAL QUALITY.

WHEREAS, water is a valuable renewable resource and a critical necessity for all life; and

WHEREAS, water conservation activities have both a financial and operational benefit for the City; and

WHEREAS, City Council of the City of Nacogdoches, Texas, desires to continue to improve water conservation efforts.

# NOW THEREFORE, BE IT RESOLVED BY CITY COUNCIL OF THE CITY OF NACOGOCHES, TEXAS, THAT:

The City of Nacogdoches, Texas, hereby adopts 2019 edition of the Water Conservation Plan For Municipal Use By Retail Public Suppliers (Attached hereto as Exhibit "A") and the Water Conservation Plan For Wholesale Public Water Suppliers (Attached hereto as Exhibit "B") in accordance with Texas Commission on Environmental Quality Rules as set forth in Title 30 of the Texas Administrative Code, Chapter 288.

PASSED AND APPROVED, this the A day of 2019.

**CITY OF NACOGDOCHES** mann SHELLEY BROPHY, May **APPROVED AS TO FORM:** ATTEST: JAN VINSON, City Secretary JEFFERSON B. DAVIS, City Attorney **APPROVED AS TO CONTENT:** 

STEVE BARTLETT, City Engineer

## EXHIBIT A



## 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 Municipal Water Use by Retail Public Water Suppliers

This form is provided to assist retail public water suppliers in water conservation plan 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 <u>http://www.twdb.texas.gov/conservation/BMPs/index.asp</u>. 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 of Water Supplier:	City of Nacogdoches	TX1740003
Address:	_PO Box 635030	
Telephone Number:	(936) 564-5046	Fax: (936) 569-2729
Water Right No.(s):	_4864-A	
Regional Water Planning Group:	I	
Water Conservation Coordinator (or person responsible for implementing conservation program):	Bart Allen	Phone: (936) 564-5046
Form Completed by:	Bart Allen	
Title:	Water Utility Manager	
Signature:		Date:5/8/2019

A water conservation plan for municipal use by retail public water suppliers must include the following requirements (as detailed in 30 TAC Section 288.2). 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. POPULATION AND CUSTOMER DATA

- A. Population and Service Area Data
  - 1. Attach a copy of your service-area map and, if applicable, a copy of your Certificate of Convenience and Necessity (CCN). CNN # 11182
  - Service area size (in square miles): 35 (Please attach a copy of service-area map)
  - 3. Current population of service area: 37000
  - 4. Current population served for:
    - a. Water 37000
    - b. Wastewater 33000

Year	Population	Year	Population
2014	36000	2020	37750
2015	37000	2030	41500
2016	37000	2040	46600
2017	37000	2050	51200
2018	37000	2060	56300

5. Population served for previous five years:

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

 List source or method for the calculation of current and projected population size. Estimated census data and historical growth projections.

### B. Customer Data

Senate Bill 181 requires that uniform consistent methodologies for calculating water use and conservation be developed and available to retail water providers and certain other water use sectors as a guide for preparation of water use reports, water conservation plans, and reports on water conservation efforts. <u>A water system must provide the most detailed level of customer and water use data available to it, however, any new billing system purchased must be capable of reporting data for each of the sectors listed below. More guidance can be found at: http://www.twdb.texas.gov/conservation/doc/SB181Guidance.pdf</u>

## 1. Quantified 5-year and 10-year goals for water savings:

	Historic 5- year Average	Baseline	5-year goal for year 2023	10-year goal for year 2028
Total GPCD	201		200	195
Residential GPCD	58		56	54
Water Loss GPCD	26		34	30
Water Loss Percentage	12.88		16	14

Notes:

Total GPCD = (Total Gallons in System ÷ Permanent Population) ÷ 365 Residential GPCD = (Gallons Used for Residential Use ÷ Residential Population) ÷ 365 Water Loss GPCD = (Total Water Loss ÷ Permanent Population) ÷ 365 Water Loss Percentage = (Total Water Loss ÷ Total Gallons in System) x 100; or (Water Loss GPCD ÷ Total GPCD) x 100

2. Current number of active connections. Check whether multi-family service is counted as x Residential or Commercial?

Treated Water Users	Metered	Non-Metered	Totals
Residential	Concernant of the second second		
Single-Family	9705		9705
Multi-Family	5279		5279
Commercial	1430		1430
Industrial/Mining	50		50
Institutional	184		184
Agriculture	1797		1797
Other/Wholesale			

3. List the number of new connections per year for most recent three years.

Year	2016	2017	2018
Treated Water Users			
Residential			
Single-Family	48	39	43
Multi-Family	0	0	0
Commercial	14	7	13
Industrial/Mining	0	0	0
Institutional	10	2	0
Agriculture	45	45	39
Other/Wholesale			

4. List of annual water use for the five highest volume customers.

Customer	Use (1,000 gal/year)	Treated or Raw Water	
Pilgrims	697232	Treated	
SFA	157206	Treated	
City of Nacogdoches	124386	Treated	
Coca Cola-Southwest Beverges	66996	Treated	
D&M Water	31525	Treated	

## II. WATER USE DATA FOR SERVICE AREA

### A. Water Accounting Data

1. List the amount of water use for the previous five years (in 1,000 gallons).

Indicate whether this is  $\Box$  diverted or x $\Box$  treated water.

Year	2014	2015	2016	2017	2018
Month					
January	162147	163098	172217	178676	174103
February	166839	171443	179514	177847	173787
March	155459	149853	181660	167783	157708
April	170422	166307	193104	183734	182532
May	195425	172120	199111	196166	194886
June	200464	163614	207334	192381	232097
July	203003	195985	220932	196903	243163
August	224866	305260	286409	221939	263097
September	249194	299430	216896	202118	272727
October	217240	_ 271140	226129	206617	193392
November	192960	223502	229890	219817	187185
December	185401	164349	_182031	182862	151501
Totals	2323426	2446107	2495232	2326851	2426118

2. Describe how the above figures were determined (e.g. from a master meter located at the point of a diversion from the source or located at a point where raw water enters the treatment plant, or from water sales).

**Retail** sales

3. Amount of water (in 1,000 gallons) delivered/sold as recorded by the following account types for the past five years.

Year	2014	2015	2016	2017	2018
Account Types					
Residential					
Single-Family	515718	531630	518932	407111	507368
Multi-Family	250220	253279	256662	243355	245368
Commercial	206683	251500	203338	192464	184624
Industrial/Mining	780500	824998	880994	824671	859075
Institutional	236543	236543	195235	195235	35750
Agriculture	265144	293264	331904	255139	272285
Other/Wholesale	29257	36168	34645	32752	42668

4. List the previous records for water loss for the past five years (the difference between water diverted or treated and water delivered or sold).

Year	Amount (gallons)	Percent %
2018	475594568	17.11
2017	472112616	17.30
2016	420698068	14.77
2015	216574260	8.20
2014	166990060	7.00

### B. Projected Water Demands

1. If applicable, attach or cite projected water supply demands from the applicable Regional Water Planning Group 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. Water Supply Sources
  - 1. List all current water supply sources and the amounts authorized (in acre feet) with each.

Water Type	Source	Amount Authorized
Surface Water	Lake Nacogdoches	22,000 annually

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

- 1. Design daily capacity of system (MGD): 32
- 2. Storage capacity (MGD):
  - a. Elevated 2.65
  - b. Ground 14.2
- 3. If surface water, do you recycle filter backwash to the head of the plant?

x Yes No If yes, approximate amount (MGD): 1.4 MGD

#### IV. WASTEWATER SYSTEM DATA

- A. Wastewater System Data (if applicable)
  - 1. Design capacity of wastewater treatment plant(s) (MGD): 12.88
  - 2. Treated effluent is used for in on-site irrigation, if off-site irrigation, for x plant washdown, and/or for ichlorination/dechlorination.

If yes, approximate amount (in gallons per month): 240,000

3. Briefly describe the wastewater system(s) of the area serviced by the water utility. 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.

The wastewater treatment plant and collection system are owned and operated by the City of Nacogdoches. The wastewater treatment plant is permitted for 12.88 MGD under TPDES Permit No. WQ0010342004. Treated effluent is discharged from the plant into Lanana Creek and then to Segment 0611(Angelina River) in the Neches River Basin.

- B. Wastewater Data for Service Area (if applicable)
  - 1. Percent of water service area served by wastewater system: 95%
  - 2. Monthly volume treated for previous five years (in 1,000 gallons):

Year	2014	2015	2016	2017	2018
Month					
January	120321	126616	126761	129263	136683
February	128103	127924	130465	134148	133644

March	119019		130978	122172	122330
April	124971	132921	132424	129691	136024
May	136143	134788	134055	136064	138576
June	135462	125129	137594	127197	131652
July	138892	135242	131625	124872	126968
August	145821	178049	150717	142685	146289
September	159169	176489	139581	138713	159729
October	142207	160804	140074	135661	134391
November	136937	147570	143161	149806	142653
December	126519	128764	127896	129885	124459
Totals	1633403	1600162	1625336	1691449	1613567



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# EXHIBIT B



## 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 <u>http://www.twdb.texas.gov/conservation/BMPs/index.asp</u>. 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:	Bart Allen				
Address:	PO Box 635030				
Telephone Number:	(936)564-5046 Fax: (936) 569-2729				
Water Right No.(s):	4864-A				
Regional Water Planning Group:	I				
Person responsible for implementing conservation program:	Bart Allen	Phone: (936) 564-5046			
Form Completed By:	Bart Allen				
Title:	Water Utility Manager				
Signature:	Dow	Date: 5/6 /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)

35

2. Current population of service area:

3000 estimated

- 3. Current population served for:
  - a. Water 3000
  - b. Wastewater 0
- 4. Population served for previous five years:
- Projected population for service area in the following decades:

Year	Population	Year	Population
2018	3000	2020	3000
2017	3000	2030	unknown
2016	3000	2040	
2015	3000	2050	
2014	3000	2060	

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

Wholesale water sales are to other water suppliers that are situated adjacent to the City of Nacogdoches and are based on limited volume contracts for treated water. Sales are not based on their connection counts or population, and water delivery is limited to their maximum contract volume. Water sales have remained constant over the past five years. A population of 3000 customers is estimated. Future population projections for 40 year period is unknown and will not affect present or future water volume contract amounts.

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:

Wholesale Customer	Contracted Amount (Acre-feet)	Previous Year Amount of Water Delivered (acre-feet)	
D&M Water Supply	257.79	96.74	

MUD 1	67.20	20.33
Appleby Water Supply	93.34	13.53
Melrose Water Supply	36.83	0.33

### II. WATER USE DATA FOR SERVICE AREA

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## 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	89.78	
2015	95.65	
2016	106.32	
2017	98.50	
2018	130.94	
Totals	520.65	

### 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: max diversion rate GPM

Year	2014	2015	2016	2017	2018
Month					
January	21.61	20.88	22.77	21.93	26.56
February	22.26	21.82	24.95	22.01	21.63
March	20.34	20.90	23.28	23.90	23.27
April	22.17	21.33	28.16	24.15	25.14
May	26.08	21.06	24.22	26.15	27.44
June	23.60	38.17	25.98	22.97	31.19
July	27.54	34.69	31.09	26.54	33.28
August	27.34	34.23	33.62	25.08	32.40
September	30.24	32.47	30.44		26.84

				23.95	
October	23.20	30.57	29.92	27.06	24.88
November	23.54	20.20	31.26	24.80	24.00
December	19.76	21.39	23.64	22.08	21.95
Totals	287.68	317.71	301.93	290.62	318.58

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	3000	89.78		
2015	3000	95.65		
2016	3000	106.32		
2017	3000	98.50		
2018	3000	130.94		

#### 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 Nacogdoches	
Groundwater	Wells 6,7,8,9,11,12,13,14,16	
Other		

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

- 1. Design daily capacity of system (MGD):
  - 32

- 2. Storage capacity (MGD):
  - a. Elevated 2.625
  - b. Ground 14.2
- 3. Please attach a description of the water system. Include the number of treatment plants, wells, and storage tanks

#### IV. WASTEWATER SYSTEM DATA

- A. Wastewater System Data (if applicable)Not Applicable for Wholesale Area
  - 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: 0%
- 2. Monthly volume treated for previous five years (in 1,000 gallons):

Year			 
Month			 
January	 		 
February		Management of the second s	 
March			 
April			
May			
June			
July			
August			
September			 
October	-		
November			 

Totals

