APPENDIX A

Water Contracts (RWRD)

SUSAN ROTH
water and wastewater consulting

FIRST SUPPLEMENT AND AMENDMENT TO THE AGREEMENT FOR PURCHASE AND SALE OF ASSETS AND ASSIGNMENT AND ASSUMPTION OF CONTRACT RIGHTS

This *First Supplement and Amendment to the Agreement for Purchase and Sale of Assets and Assignment and Assumption of Contract Rights* is made by and between TexAmericas Center, a political subdivision of the state of Texas, acting by and through its duly authorized Board of Directors (hereinafter called "TAC"), and Riverbend Water Resources District, a conservation and reclamation district of the State of Texas, acting by and through its duly authorized Board of Directors (hereinafter referred to as "Riverbend"), and is effective as of the date set opposite the signature of the last party to execute this agreement below.

RECITALS

WHEREAS, TAC is a governmental agency and political subdivision of the state of Texas, existing pursuant to and having the powers set forth in Chapter 3503 of the Special District Local Laws Code of the State of Texas;

WHEREAS, Riverbend is a conservation and reclamation district created under and essential to accomplish the purposes of Section 59 Article XVI, Texas Constitution, existing pursuant to and having the powers set forth in Chapter 9601 of the Special District Local Laws Code of the state of Texas;

WHEREAS, TAC and Riverbend entered into an *Agreement for Purchase and Sale of Assets and Assignment and Assumption of Contract Rights* dated May 26, 2015, hereinafter ("Agreement");

WHEREAS, the Agreement provided for the survival of certain covenants to include sections of the Agreement contemplating performance beyond the Closing date as reflected under paragraph XII entitled "Survival of Representations and Warranties" at section 12.01, and paragraph XXIII entitled "Additional Agreements" at section 23.12;

WHEREAS, TAC and Riverbend desire to supplement the Agreement and memorialize a proposed timeframe for Riverbend's acquisition of water rights, and for construction and deployment of facilities and infrastructure necessary to deliver raw water to an agreed upon location on the TAC-East property as contemplated under section 23.12 of the Agreement; and

WHEREAS, TAC and Riverbend desire to amend section 23.12 of the Agreement, but not otherwise, to accurately reflect the projections for future demand and usage, and the obligations of the respective parties relative thereto.

XXIII. ADDITIONAL AGREEMENTS

23.12. Timeframe for delivery of raw water capability. By mutual consent of the parties to the Agreement, Riverbend, in cooperation with TAC, set forth the following tentative timeframe

for Riverbend's acquisition of water rights, and for construction and deployment of facilities and infrastructure necessary to deliver raw water to an agreed upon location on the TAC-East property, to wit:

2020 Intake in place; raw water line in place

Water rights secured from TCEQ for additional water made available through the Ultimate Rule Curve.

2021 Delivery of raw water to the TAC footprint.

Additionally, the parties agree that Riverbend shall design and construct said facilities and infrastructure off Bowie Parkway on the TAC footprint, or at another mutually agreeable location, to deliver to the TAC footprint and any tenants thereon not less than thirty million (30,000,000) gallons per day of raw, non-potable water upon commencement of operations of said facilities and infrastructure as provided under the aforementioned timeline. Further, the parties agree that Riverbend shall reserve capacity in said facilities and infrastructure and/or in the first system expansion thereafter to deliver an additional sixty million (60,000,000) gallons per day of raw, non-potable water to the TAC footprint and any tenants thereon.

The parties acknowledge and agree the timeframe set forth in this amended section 23.12, as well as all obligations imposed hereunder, are expressly contingent upon the anticipated implementation of the Ultimate Rule Curve ("URC"); and any delay in the implementation thereof will directly affect the timeframe and obligations set forth herein. As such, the timely implementation of the URC shall act as a condition precedent to Riverbend's obligations under this amended section 23.12 as well as the timeline set forth hereunder. Moreover, the final timeline is subject to board approval by the respective parties' board of directors following implementation of the URC.

In witness whereof, the parties have affixed their signatures hereto on the dates set forth below to supplement and amend section 23.12, but not otherwise, of the *Agreement for Purchase and Sale of Assets and Assignment and Assumption of Contract Rights* dated May 26, 2015.

Riverbend Water Resources District

BY: _____ _____, 2017.
Marshall Wood, Board of Directors

TexAmericas Center

BY: _____ _____, 2017.
Boyd Sartin, Board of Directors

APPENDIX B

Population Projections for Participating Entities

SUSAN ROTH
water and wastewater consulting

Riverbend Water Resources District
Regional Water Master Plan
Population Projections for Study Area

	POPULATION											
Entity	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**	**2055**	**2060**	**2065**	**2070**
Central Bowie County WSC*	Average HH Size = 2.50											
TWDB Projections (2016 Reg. D Water Plan)	6539	7652	7761	7869	7903	7937	7937	7937	7937	7937	7937	7937
TWDB Projections (2021 Draft Reg. D Water Plan)		7529	7636	7742	7776	7809	7809	7809	7809	7809	7809	7809
Sum for Central Bowie Co WSC Area	6718	7529	7636	8037	8459	8903	9370	9862	10379	10924	11497	12101
City of Annona*	Average HH Size = 2.43											
Sum for City of Annona Area	317	318	320	321	323	325	326	328	329	331	333	334
City of Atlanta*	Average HH Size = 2.46											
TWDB Projections (2016 Reg. D Water Plan)	5727	5778	5798	5818	5818	5818	5818	5818	5818	5818	5818	5818
TWDB Projections (2021 Draft Reg. D Water Plan)		5672	5692	5711	5711	5711	5711	5711	5711	5711	5711	5711
City's Projections for existing CCN	5619	5877	6135	6394	6652	6910	7168	7427	7427	7427	7427	7427
Future service requests outside CCN**	0	1701	1708	1714	1714	1714	1714	1714	1714	1714	1714	1714
Sum for City of Atlanta Area	5619	7578	7843	8108	8366	8624	8882	9141	9141	9141	9141	9141
City of Avery*	Average HH Size = 2.20											
Sum for City of Avery Area	484	487	489	492	494	497	499	502	504	507	509	512
City of Clarksville	Average HH Size = 2.44											
TWDB Projections (2016 Reg. D Water Plan)	3300	3315	3315	3315	3315	3315	3315	3315	3315	3315	3315	3315
TWDB Projections (2021 Draft Reg. D Water Plan)		3315	3315	3315	3315	3315	3315	3315	3315	3315	3315	3315
Sum for City of Clarksville Area	3300	3315	3315	3315	3315	3315	3315	3315	3315	3315	3315	3315
City of De Kalb*	Average HH Size = 2.32											
TWDB Projections (2016 Reg. D Water Plan)	1728	1757	1782	1807	1815	1822	1822	1822	1822	1822	1822	1822
TWDB Projections (2021 Draft Reg. D Water Plan)		1658	1681	1704	1711	1718	1718	1718	1718	1718	1718	1718
Sum for City of De Kalb Area	1699	1711	1734	1748	1762	1769	1769	1780	1792	1803	1815	1827
City of Hooks*	Average HH Size = 2.45											
TWDB Projections (2016 Reg. D Water Plan)	2816	2863	2904	2944	2957	2970	2970	2970	2970	2970	2970	2970
TWDB Projections (2021 Draft Reg. D Water Plan)		2863	2904	2944	2958	2971	2971	2971	2971	2971	2971	2971
City's Projections for existing CCN	2989	3049	3111	3173	3237	3303	3303	3303	3303	3303	3303	3303
Wholesale treated water to Burns Redbank WSC**		1576	1674	1772	1870	1968	2066	2164	2164	2164	2164	2164
Sum for City of Hooks Area	2989	4625	4785	4945	5107	5271	5369	5467	5467	5467	5467	5467
City of Leary	Average HH Size = 2.49											
Sum for City of Leary Area	545	595	644	694	744	794	844	893	943	943	943	943
City of Maud*	Average HH Size = 2.37											
TWDB Projections (2016 Reg. D Water Plan)	1074	1092	1108	1123	1128	1133	1133	1133	1133	1133	1133	1133
TWDB Projections (2021 Draft Reg. D Water Plan)		1119	1135	1151	1156	1161	1161	1161	1161	1161	1161	1161
Sum for City of Maud Area	1287	1358	1429	1500	1571	1642	1642	1642	1642	1642	1642	1642
City of Nash*	Average HH Size = 2.43											

	POPULATION											
Entity	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**	**2055**	**2060**	**2065**	**2070**
TWDB Projections (2016 Reg. D Water Plan)	3011	3061	3105	3148	3162	3175	3175	3175	3175	3175	3175	3175
TWDB Projections (2021 Draft Reg. D Water Plan)		3197	3243	3288	3302	3316	3316	3316	3316	3316	3316	3316
Sum for City of Nash Area	3730	4070	4410	4751	5091	5431	5771	6111	6111	6111	6111	6111
City of New Boston*	Average HH Size = 2.39											
TWDB Projections (2016 Reg. D Water Plan)	4628	4705	4772	4838	4859	4880	4880	4880	4880	4880	4880	4880
TWDB Projections (2021 Draft Reg. D Water Plan)		5960	6045	6129	6155	6180	6180	6180	6180	6180	6180	6180
Sum for City of New Boston Area	5255	5960	6045	6129	6155	6180	6180	6180	6180	6180	6180	6180
City of Red Lick	Average HH Size = 2.82											
TWDB Projections (2016 Reg. D Water Plan)	1026	1043	1058	1072	1077	1081	1081	1081	1081	1081	1081	1081
Sum for City of Red Lick Area	1115	1221	1328	1435	1542	1600	1600	1600	1600	1600	1600	1600
City of Redwater*	Average HH Size = 2.64											
TWDB Projections (2016 Reg. D Water Plan)	1075	1093	1109	1124	1129	1134	1134	1134	1134	1134	1134	1134
TWDB Projections (2021 Draft Reg. D Water Plan)		3116	3160	3204	3219	3233	3233	3233	3233	3233	3233	3233
Sum for City of Redwater Area	3432	3749	3989	4229	4469	4709	4949	5189	5429	5429	5429	5429
City of Texarkana (TX) - Wholesale Provider	Average HH Size = 2.42											
TWDB Projections (2016 Reg. D Water Plan)	37029	37646	38179	38712	38879	39046	39046	39046	39046	39046	39046	39046
TWDB Projections (2021 Draft Reg. D Water Plan)		37790	38325	38860	39028	39196	39196	39196	39196	39196	39196	39196
Sum for City of Texarkana (TX) Area	37201	38007	38832	39674	40534	41413	42311	43229	44166	45124	46102	47102
City of Texarkana (AR) - Wholesale Provider												
Sum for City of Texarkana (AR) Area	30355	30798	31247	31703	32165	32634	33110	33593	34083	34580	35085	35596
City of Wake Village*	Average HH Size = 2.51											
TWDB Projections (2016 Reg. D Water Plan)	5721	5949	6029	6109	6135	6160	6160	6160	6160	6160	6160	6160
TWDB Projections (2021 Draft Reg. D Water Plan)		6025	6106	6187	6213	6239	6239	6239	6239	6239	6239	6239
Sum for City of Wake Village Area	5800	6150	6500	6850	7200	7550	7900	8250	8600	8950	8950	8950
TexAmericas Center (Riverbend)*												
TWDB Projections (2016 Reg. D Water Plan)		533	541	548	551	553	553	553	553	553	553	553
TWDB Projections (2021 Draft Reg. D Water Plan)		542	550	558	561	563	563	563	563	563	563	563

** Wholesale customers of Texarkana Water Utility (TWU)*

*** Projections for City of Atlanta include Queen City, and projections for City of Hooks include Burns Redbank WSC for planning purposes.*

APPENDIX C

TWDB-Municipal Projections Revision Request Memorandum

SUSAN ROTH
water and wastewater consulting

SUSAN ROTH
water and wastewater consulting

Memorandum

Riverbend Water Resources District – Requested Revisions to the 2021 Draft Region D Population and Water Demand Projections

TO: *Liz Fazio Hale, J.D., LL.M.*

CC: *Tony Smith, P.E.*

FROM: *Susan K. Roth, P.E.*

DATE: *December 19, 2017*

Riverbend Water Resources District (RWRD) was created by the Texas Legislature in 2009 to conserve and develop water resources in order to control, store, preserve and distribute water to their Member Entities. RWRD is currently conducting a regional water master plan for the following fifteen entities: Central Bowie County Water Supply Corporation; Cities of Annona, Atlanta, Avery, Clarksville, De Kalb, Hooks, Leary, Maud, Nash, New Boston, Redwater, Texarkana (Texas), Wake Village; and TexAmericas Center.

Of these entities, only nine municipal Water User Groups (WUGs) are requesting population and water demand revisions (reference table below). Although population projections have been revised for the Cities of Annona, Avery, Leary and Red Lick, they are not classified as WUGs according to TWDB criteria. Detailed information along with supporting documentation regarding each entity's population and water demand revision requests is provided in this memorandum.

Municipal WUGs & Wholesale Water Providers	Service Area – Primary County
Central Bowie County WSC	Bowie
City of De Kalb	Bowie
City of Hooks	Bowie
City of Maud	Bowie
City of Nash	Bowie
City of Redwater	Bowie
City of Texarkana (TX)	Bowie
City of Wake Village	Bowie
City of Atlanta	Cass

Central Bowie County WSC, City of Nash and City of Texarkana are also requesting revisions to their base gallons per capita per day (GPCD). Central Bowie County WSC is currently providing water to additional customers located outside of their water CCN, which has resulted in a higher GPCD. The City of Nash conducted extensive annexation activities in 2015, as well as at the end of 2013 which impacted their GPCD. For the City of Texarkana (TX), a correction needs to be made to their base GPCD. The 2011 per capita water usage for the City of Texarkana (TX) is calculated to be 177 GPCD. This calculation is based on their 2011 metered water usage of 2,359,926,122 gallons and the 2011 City of Texarkana (TX) population of 36,569.

As an observation, all of the RWRD member entities' Draft 2021 Region D municipal population and water demand projections are held constant from 2040 through 2070 with the exception of City of Atlanta (held constant starting in 2030) and City of Clarksville (held constant starting in 2020). Many of these entities have plans to expand their water service areas as shown in the supporting documentation; however, they are currently not able to due to the water infrastructure limitations of Texarkana Water Utilities (TWU), which in turn has affected their ability to revise their water CCN boundaries through the Public Utility Commission (PUC). As a result, RWRD is looking at constructing a new regional water treatment plant, distribution and raw water conveyance system according to the TCEQ capacity requirement (0.6 gpm per connection) in order to meet the existing and future water demands of the member entities.

1.0 Summary of Draft Projections and Requested Revisions – Bowie County

TWDB 2021 Draft Projections	**2020**	**2030**	**2040**	**2050**	**2060**	**2070**
Burns Redbank WSC	1,576	1,620	1,634	1,634	1,634	1,634
Central Bowie County WSC	7,529	7,742	7,809	7,809	7,809	7,809
County-Other, Bowie	15,586	16,134	16,304	16,304	16,304	16,304
De Kalb	1,658	1,704	1,718	1,718	1,718	1,718
Hooks	2,863	2,944	2,971	2,971	2,971	2,971
Macedonia Eylau MUD 1	8,742	8,892	8,939	8,939	8,939	8,939
Maud	1,119	1,151	1,161	1,161	1,161	1,161
Nash	3,197	3,288	3,316	3,316	3,316	3,316
New Boston	5,960	6,129	6,180	6,180	6,180	6,180
Redwater	3,116	3,204	3,233	3,233	3,233	3,233
Riverbend WRD	542	558	563	563	563	563
Texarkana (TX)	37,790	38,860	39,196	39,196	39,196	39,196
Wake Village	6,025	6,187	6,239	6,239	6,239	6,239
Total Bowie County	**95,703**	**98,413**	**99,263**	**99,263**	**99,263**	**99,263**

Requested Revisions	2020	2030	2040	2050	2060	2070
Central Bowie County WSC	7,529	8,037	8,903	9,862	10,924	12,101
De Kalb	1,711	1,748	1,769	1,780	1,803	1,827
Hooks	3,049	3,173	3,303	3,303	3,303	3,303
Maud	1,358	1,500	1,642	1,642	1,642	1,642
Nash	4,070	4,751	5,431	6,111	6,111	6,111
Redwater	3,749	4,229	4,709	5,189	5,429	5,429
Texarkana (TX)	38,007	39,674	41,413	43,229	45,124	47,102
Wake Village	6,150	6,850	7,550	8,250	8,950	8,950
Bowie County-Other	13,260	11,252	7,227	7,227	7,227	7,227
From Hunt County-Other	0	0	0	4,646	8,566	11,745
New Total Bowie County	**95,703**	**98,413**	**99,263**	**103,909**	**107,829**	**111,008**

1.1 Central Bowie County WSC

Summary of Comments Received:

1. Request for revision to population and water projections.
2. Central Bowie County WSC (CBCWSC) receives 100 percent of their treated water supply from Texarkana Water Utilities (TWU) on a wholesale basis.
3. Central Bowie County WSC's residential meter count in 2015 was 2687. The residential meter count for CBCWSC in 2010 was 2553. Based on the historical residential meter count from 2010-2015, they add approximately 26.8 connections per year.
4. Central Bowie County WSC's current CCN boundary is vast and encompasses approximately 98,059 acres. CBCWSC is also currently serving 168 properties within an additional 6,000 acre area outside of their CCN. Based on inquiries by residents for water service, they plan to add an additional 1,000 acres and 30 more properties located outside of their CCN.
5. CBCWSC is in the process of amending their CCN; however, they are still attempting to increase the volume of their wholesale water contract with TWU since they do not meet the TCEQ minimum capacity requirement of 0.6 GPM per connection.

Summary of Supporting Materials Received (reference attachments):

1. Information provided by General Manager (Hal Harris) for RWRD Regional Water Master Plan.

RWPG Recommendation:

1. Methodology: Population projections were based on their 2015 residential meter count (single and multi-family) and an average household size of 2.50 (also noted in KSA Engineers reporting on 2005 TWDB Water Use Survey for CBCWSC); historical residential meter counts from 2010-2015 were used to determine the average annual growth rate of 1.03% for projections from 2030 through 2070. TWDB 2020 population projections were used since they better represent the growth scenario for CBCWSC.

2. Revise population projections for CBCWSC as shown in the table below:

CBCWSC	2020	2030	2040	2050	2060	2070
TWDB 2021 Draft Projections	7,529	7,742	7,809	7,809	7,809	7,809
Difference (from Bowie County- Other)	0	295	1,094	2,053	3,115	4,292
Revised Population Projections	7,529	8,037	8,903	9,862	10,924	12,101

3. Recalculate CBCWSC's GPCD projections using the TWDB 2011 historical estimate of 81 GPCD as their base rate, which more accurately represents the increase in the growing number of water customers that CBCWSC is serving within and outside of their CCN.

CBCWSC	2020	2030	2040	2050	2060	2070
TWDB 2021 Draft Projections	62	60	60	60	60	60
CBCWSC's revised GPCD*	73	71	71	71	71	71

* TWDB staff calculated revised GPCD projections to incorporate the Plumbing Code (PC) Savings.

1.2 City of De Kalb

Summary of Comments Received:

1. Request for revision to population and water demand projections.
2. The City of De Kalb receives 100 percent of their treated water supply from Texarkana Water Utilities (TWU) on a wholesale basis.
3. City of De Kalb's current CCN boundary encompasses approximately 6,067 acres. The city is currently providing water service to an additional 70 acres adjoining its Industrial Park; this area is located outside of the city's CCN; however, the TCEQ and PUC have denied the city's request to amend their CCN due to TWU's inability to supply the adequate capacity required by TCEQ.
4. The city has plans to develop a large rodeo/event facility sponsored by PBR Champion, Mike White. The city has also been having discussions regarding the development of a truck center, hotel and restaurant located north of their Industrial Park. These projects are on hold to the current situation with their CCN and having adequate water supply.

Summary of Supporting Materials Received (reference attachments):

1. Information provided by the Mayor (Dennis Wandrey) for RWRD Regional Water Master Plan.

RWPG Recommendation:

1. Methodology: Population projections were based on their 2015 residential (single and multi-family) population of 1699 and an average household size of 2.32 (U.S. Census data). Based on their historical data, the City adds approximately one connection per year and is the basis for the projections from 2020 through 2070.

2. Revise population projections for the City as shown in the table below:

City of De Kalb	2020	2030	2040	2050	2060	2070
TWDB 2021 Draft Projections	1,658	1,704	1,718	1,718	1,718	1,718
Difference (from Bowie County- Other)	53	44	51	62	85	109
Revised Population Projections	1,711	1,748	1,769	1,780	1,803	1,827

1.3 City of Hooks

Summary of Comments Received:

1. Request for revision to population and water demand projections.
2. The City of Hooks receives 100 percent of their treated water supply from Texarkana Water Utility (TWU) on a wholesale basis.
3. In turn, the City of Hooks supplies 100 percent of Burns-Redbank WSC's entire water needs on a wholesale basis, which represents approximately 39% of the City's total water purchased from TWU. Although the city is still slowly growing, the primary growth is occurring in Burns-Redbank WSC's service area.
4. The City of Hooks' current CCN boundary encompasses approximately 4,578 acres and land locked (other water providers located adjacently). The city's CCN area includes the city limits, as well as an area approximately 0.31 square miles outside of the city limits.
5. The City recently implemented a 'smart meter' program and has installed 1,279 smart meters to date. The City will be installing an additional 36 meters by 2019 for a total of 1,315.
6. Based on previous consulting work, the City's population is expected to reach complete build-out of approximately 3,300 by 2040.
7. The City does not meet TCEQ's minimum capacity requirement of 0.6 GPM per connection due to TWU's alternative capacity exemption.

Summary of Supporting Materials Received (reference attachments):

1. Information provided by the City Manager (Buck Buchanan) for RWRD Regional Water Master Plan.

RWPG Recommendation:

1. Methodology: Population projections were based on their 2015 residential meter count (single and multi-family) of 1220 and an average household size of 2.45 (U.S. Census data); historical residential meter counts from 2013-2016 were used to determine the average annual growth rate of 1.43% for projections from 2020 through 2040 when the city reaches full build-out.

2. Revise population projections for the City as shown in the table below:

City of Hooks	2020	2030	2040	2050	2060	2070
TWDB 2021 Draft Projections	2,863	2,944	2,971	2,971	2,971	2,971
Difference (from Bowie County- Other)	186	229	332	332	332	332
Revised Population Projections	3,049	3,173	3,303	3,303	3,303	3,303

1.4 City of Maud

Summary of Comments Received:

1. Request for revision to population and water demand projections.
2. The City of Maud receives 100 percent of their treated water supply from Texarkana Water Utility (TWU) on a wholesale basis.
3. City of Maud's CCN boundary is approximately 927 acres and have plans to expand it by an additional 2,000 acres. The city is currently serving 145 connections outside of their CCN.
4. The City does not meet TCEQ's minimum capacity requirement of 0.6 GPM per connection due to TWU's alternative capacity exemption.

Summary of Supporting Materials Received (reference attachments):

1. Information provided by the City Secretary (Pollyana Moore) and MTG Engineers for the RWRD Regional Water Master Plan.

RWPG Recommendation:

1. Methodology: Population projections were based on their 2015 residential meter count (single and multi-family) of 543 and an average household size of 2.37 (U.S. Census data). Based on their historical data from 2012-2015, the City adds approximately six connections per year and is the basis for the projections from 2020 through 2040. Population projections are also based on the City's 2012 Comprehensive Plan.
2. Revise population projections for the City as shown in the table below:

City of Maud	2020	2030	2040	2050	2060	2070
TWDB 2021 Draft Projections	1,119	1,151	1,161	1,161	1,161	1,161
Difference (from Bowie County- Other)	239	349	481	481	481	481
Revised Population Projections	1,358	1,500	1,642	1,642	1,642	1,642

1.5 City of Nash

Summary of Comments Received:

1. Request for revision to population and water demand projections.
2. The City of Nash receives 100 percent of their treated water supply from Texarkana Water Utility (TWU) on a wholesale basis.

3. City of Nash's current CCN boundary encompasses approximately 3,924 acres; the city's service area has increased by one-third since extensive annexation activities in 2013 and 2015. This growth includes the construction of King City Travel Center at Interstate 30 with plans in the works to construct approximately 200-300 more homes, a 72 unit apartment complex and an additional 100 units for senior citizens. In addition, the city plans to annex an additional 1900 acres for future development.

4. The City is attempting to increase the volume of their wholesale water contract with TWU; they do not meet the TCEQ minimum capacity requirement of 0.6 GPM per connection.

Summary of Supporting Materials Received (reference attachments):

1. Information provided by the City Manager (Doug Bowers) and MTG Engineers for the RWRD Regional Water Master Plan.

RWPG Recommendation:

1. Methodology: Population projections were based on their 2015 residential meter count (single and multi-family) of 1535 and an average household size of 2.43 (U.S. Census data). Based on their historical data from 2012-2016, the City adds approximately 28 connections per year and is the basis for the projections from 2020 through 2050. Population projections were also based on the City's 2011 Comprehensive Plan and recent/future annexation activities.
2. Revise population projections for the City as shown in the table below:

City of Nash	2020	2030	2040	2050	2060	2070
TWDB 2021 Draft Projections	3,197	3,288	3,316	3,316	3,316	3,316
Difference (from Bowie County- Other)	873	1,463	2,115	2,795	2,795	2,795
Revised Population Projections	4,070	4,751	5,431	6,111	6,111	6,111

3. Recalculate the City's GPCD projections using the TWDB 2011 historical estimate of 86 GPCD as their base rate since they did not submit a TWDB Water Use Survey for that year.

City of Nash	2020	2030	2040	2050	2060	2070
TWDB 2021 Draft Projections	60	60	60	60	60	60
City's revised GPCD*	86	86	86	86	86	86

* TWDB staff calculated revised GPCD projections to incorporate the Plumbing Code (PC) Savings.

1.6 City of Redwater

Summary of Comments Received:

1. Request for revision to population and water demand projections.
2. The City of Redwater receives 100 percent of their treated water supply from Texarkana Water Utility (TWU) on a wholesale basis.
3. City of Redwater's current CCN boundary encompasses approximately 9,409 acres with plans to annex an additional 1,300 acres for future development. A number of farms

have sold recently in the city's service area with a change in land use and construction of new subdivisions.

4. The City is attempting to increase the volume of their wholesale water contract with TWU; they do not meet the TCEQ minimum capacity requirement of 0.6 GPM per connection.

Summary of Supporting Materials Received (reference attachments):

1. Information provided by the Mayor (Robert Lorance) and A.L. Franks Engineering for the RWRD Regional Water Master Plan.

RWPG Recommendation:

1. Methodology: Population projections were based on their 2015 residential meter count (single and multi-family) of 1300 and an average household size of 2.64 (U.S. Census data). Based on their historical data from 2010-2015, the City adds approximately 24 connections per year and is the basis for the projections from 2020 through 2060. Population projections were also based on the city's recent/future annexation activities.

2. Revise population projections for the City as shown in the table below:

City of Redwater	2020	2030	2040	2050	2060	2070
TWDB 2021 Draft Projections	3,116	3,204	3,233	3,233	3,233	3,233
Difference (from Bowie County- Other)	633	1,025	1,476	1,956	2,196	2,196
Revised Population Projections	3,749	4,229	4,709	5,189	5,429	5,429

1.7 City of Texarkana (TX)

Summary of Comments Received:

1. Request for revision to population and water demand projections.

2. City has been expending significant efforts planning for growth as evidenced by the City's Comprehensive Plan.

Summary of Supporting Materials Received (reference attachments):

1. Information provided by TWU Executive Director (J.D. Phillips) for the RWRD Regional Water Master Plan.

RWPG Recommendation:

1. Methodology: Population projections were based on the city's population projections within their water CCN service area. Based on the city's historical data from 2010-2015 and future development plans, the TWU Executive Director provided an average annual growth rate of 0.43% for projections from 2020 through 2070.

2. Revise population projections for the City as shown in the table below:

City of Texarkana (TX)	2020	2030	2040	2050	2060	2070
TWDB 2021 Draft Projections	37,790	38,860	39,196	39,196	39,196	39,196
Difference (from Bowie County- Other)	217	814	2,217	4,033	5,928	7,906
Revised Population Projections	38,007	39,674	41,413	43,229	45,124	47,102

3. Recalculate and correct the City's GPCD projections using a revised 2011 base rate of 177 GPCD; this base rate is calculated using 2011 metered water usage and 2011 population for only Texarkana (TX).

City of Texarkana (TX)	2020	2030	2040	2050	2060	2070
TWDB 2021 Draft Projections	303	299	296	294	294	294
City's revised GPCD*	168	164	161	159	159	159

* TWDB staff calculated revised GPCD projections to incorporate the Plumbing Code (PC) Savings.

1.8 City of Wake Village

Summary of Comments Received:

1. Request for revision to population and water demand projections.
2. The City of Wake Village receives 100 percent of their treated water supply from Texarkana Water Utility (TWU) on a wholesale basis.
3. City of Wake Village's current CCN boundary encompasses approximately 1,306 acres. In 2005 and 2010, the City annexed an additional 1,000 acres and needs to revise their CCN boundary; 500 acres are located towards the west and consist of open undeveloped property. One of the properties is Meadowbrook Heights Subdivision. It is subdivided but undeveloped (149 lots x 2.51 people per connection = 372 people).
4. The additional 500 acres annexed in 2010 are located to the west of the other annexed property; the city estimates approximately 400 acres of developable property and planning for an additional 5,952 people for the targeted subdivisions.
5. The City is attempting to increase the volume of their wholesale water contract with TWU; they do not meet the TCEQ minimum capacity requirement of 0.6 GPM per connection.

Summary of Supporting Materials Received (reference attachments):

1. Information provided by the City Manager (Mike Burke) for the RWRD Regional Water Master Plan.

RWPG Recommendation:

1. Methodology: Projections were based on their 2015 residential (single and multi-family) population of 5800 (aligns with their 2015 meter count of 2311; U.S. Census data shows an average household size of 2.51 for the city). Based on their historical data from 2010-2015, the City Manager provided that the city's population increases by approximately 70 people per year and is the basis for the projections from 2020 through 2060

(information revised from previous data provided from Master Plan Survey). Population projections were also based on the city's recent/future annexation activities.

2. Revise population projections for the City as shown in the table below:

City of Wake Village	2020	2030	2040	2050	2060	2070
TWDB 2021 Draft Projections	6,025	6,187	6,239	6,239	6,239	6,239
Difference (from Bowie County- Other)	125	663	1,311	2,011	2,711	2,711
Revised Population Projections	6,150	6,850	7,550	8,250	8,950	8,950

1.9 Bowie County-Other

Summary of Comments Received:

1. No requests received.

Summary of Supporting Materials Received (reference attachments):

1. None.

RWPG Recommendation & Methodology:

1. Move population from Bowie County-Other to cover population revision request from RWRD WUGs located in Bowie County.

2. Move population from Hunt County-Other during 2050 through 2070 to Bowie County-Other in order to maintain existing and future population using individual private groundwater wells or being served by a retail water provider that is not classified as a TWDB Water Utility Group (WUG).

Bowie County-Other	2020	2030	2040	2050	2060	2070
TWDB 2021 Draft Projections	15,586	16,134	16,304	16,304	16,304	16,304
Difference (to RWRD Entities)	(2,326)	(4,882)	(9,077)	(13,723)	(17,643)	(20,822)
Difference (from Hunt County-Other)	0	0	0	4,646	8,566	11,745
Revised Population Projections	13,260	11,252	7,227	7,227	7,227	7,227

2.0 Summary of Draft Projections and Requested Revisions – Cass County

TWDB 2021 Draft Projections	2020	2030	2040	2050	2060	2070
Atlanta	5,672	5,711	5,711	5,711	5,711	5,711
County-Other, Cass	12,419	12,508	12,508	12,508	12,508	12,508
E M C WSC	793	793	793	793	793	793
Eastern Cass WSC	2,074	2,089	2,089	2,089	2,089	2,089
Holly Springs WSC	1,166	1,175	1,175	1,175	1,175	1,175
Hughes Springs	2,469	2,487	2,487	2,487	2,487	2,487
Linden	2,115	2,129	2,129	2,129	2,129	2,129
Mims WSC	281	281	281	281	281	281
Queen City	1,701	1,714	1,714	1,714	1,714	1,714
Western Cass WSC	2,326	2,342	2,342	2,342	2,342	2,342
Total Cass County	**31,016**	**31,229**	**31,229**	**31,229**	**31,229**	**31,229**
Requested Revisions	**2020**	**2030**	**2040**	**2050**	**2060**	**2070**
Atlanta	5,877	6,394	6,910	7,427	7,427	7,427
Cass County-Other	12,214	11,825	11,309	10,792	10,792	10,792

2.1 City of Atlanta

Summary of Comments Received:

1. Request for revision to population and water demand projections.
2. The City of Atlanta's revision request is based on the City's 2013 Comprehensive Plan; although the population trend shows a slight decrease each decade from 1980 to 2010 in this plan, the City has continued to experience steady growth in residential population from 2010 through today as shown in their TWDB Water Use Surveys.
3. The City recently conducted a downtown revitalization program to plan for and incentivize commercial growth; this program was funded through the U.S. Department of Agriculture (USDA) with a Rural Business Enterprise Grant along with a local grant match from the Atlanta City Development Corporation.
4. The City is currently in negotiations with Fibrtec, a thermoplastic composites parts manufacturing facility associated with DuPont and Purdue University, for a lease site in the City's business park. The establishment of this facility will most likely lead to tremendous growth for the area.

5. City of Atlanta's current CCN boundary encompasses approximately 7,112 acres. Figure 4H in the City's 2013 Comprehensive Plan provides a good depiction of additional developable areas and supports future sustained growth.

Summary of Supporting Materials Received (reference attachments):

1. Information provided by City Manager (David Cockrell) for the RWRD Regional Water Master Plan.

RWPG Recommendation:

1. Methodology: Population projections were based on their 2015 residential meter count (single and multi-family) of 2284 and an average household size of 2.46 (U.S. Census data). Based on their historical data from 2011-2015, the City Manager stated that they add approximately 21 connections per year and is the basis for their projections from 2020 through 2050.

2. Revise population projections for the City as shown in the table below:

City of Atlanta	2020	2030	2040	2050	2060	2070
TWDB 2021 Draft Projections	5,672	5,711	5,711	5,711	5,711	5,711
Difference (from Cass County-Other)	205	683	1,199	1,716	1,716	1,716
Revised Population Projections	5,877	6,394	6,910	7,427	7,427	7,427

2.2 Cass County-Other

Summary of Comments Received:

1. No requests received.

Summary of Supporting Materials Received (reference attachments):

1. None.

RWPG Recommendation & Methodology:

1. Move population from Cass County-Other to City of Atlanta.

Cass County-Other	2020	2030	2040	2050	2060	2070
TWDB 2021 Draft Projections	12,419	12,508	12,508	12,508	12,508	12,508
Difference (to City of Atlanta)	(205)	(683)	(1,199)	(1,716)	(1,716)	(1,716)
Revised Population Projections	12,214	11,825	11,309	10,792	10,792	10,792

APPENDIX D

Water Demand Projections for Participating Entities

SUSAN ROTH
water and wastewater consulting

Riverbend Water Resources District
Regional Water Master Plan
Water Demand Projections for Study Area

	Water Demands (MGD)											
Entity	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**	**2055**	**2060**	**2065**	**2070**
Central Bowie County WSC												
TWDB Projections (2016 Reg. D Water Plan)	0.55	0.48	0.47	0.47	0.47	0.48	0.48	0.48	0.48	0.48	0.48	0.48
TWDB Projections (2021 Draft Reg. D Water Plan)	0.55	0.47	0.47	0.46	0.47	0.47	0.47	0.47	0.47	0.47	0.48	0.47
GPCD based on TWDB 2021 Draft Pop. & Water Demand Proj.		62	61	60	60	60	60	60	60	60	61	60
Average day water demand (2010 & 2015 reported by TWU)	0.590	0.621	0.654	0.688	0.724	0.762	0.802	0.844	0.888	0.935	0.984	1.036
Maximum day water demand (TWU data & WTP peaking factor)	0.861	0.907	0.954	1.004	1.057	1.112	1.171	1.232	1.297	1.365	1.437	1.512
City of Annona												
Average day water demand (2010 & 2015 reported by TWU)	0.030	0.030	0.030	0.030	0.031	0.031	0.031	0.031	0.031	0.031	0.032	0.032
Maximum day water demand (TWU data & WTP peaking factor)	0.044	0.044	0.044	0.044	0.045	0.045	0.045	0.045	0.046	0.046	0.046	0.046
City of Atlanta (Queen City demands not included in these projections below but factored separatedly into sizing of New WTP for Cass County)												
TWDB Projections (2016 Reg. D Water Plan)	1.04	0.89	0.88	0.87	0.86	0.85	0.85	0.85	0.85	0.84	0.84	0.84
TWDB Projections (2021 Draft Reg. D Water Plan)	1.03	0.88	0.87	0.86	0.85	0.84	0.83	0.83	0.83	0.83	0.83	0.83
GPCD based on TWDB 2021 Draft Pop. & Water Demand Proj.		154	152	150	148	147	146	145	145	145	145	145
Average day water demand (reported by City)	0.830	0.851	0.873	0.896	0.919	0.942	0.966	0.991	0.991	0.991	0.991	0.991
Maximum day water demand (gpcd data & WTP peaking factor)	1.198	1.549	1.603	1.657	1.710	1.763	1.816	1.868	1.868	1.868	1.868	1.868
City of Avery												
Average day water demand (2010 & 2015 reported by TWU)	0.050	0.050	0.051	0.051	0.051	0.051	0.052	0.052	0.052	0.052	0.053	0.053
Maximum day water demand (TWU data & WTP peaking factor)	0.073	0.073	0.074	0.074	0.074	0.075	0.075	0.076	0.076	0.076	0.077	0.077
City of Clarksville												
TWDB Projections (2016 Reg. D Water Plan)	0.60	0.55	0.55	0.54	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
TWDB Projections (2021 Draft Reg. D Water Plan)	0.60	0.55	0.55	0.54	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
GPCD based on TWDB 2021 Draft Pop. & Water Demand Proj.		167	165	162	161	160	160	159	159	159	159	159
Average day water demand (reported by City)	0.560	0.560	0.560	0.561	0.561	0.561	0.561	0.562	0.562	0.562	0.562	0.563
Maximum day water demand (City data & est. peaking factor)	0.818	0.818	0.818	0.819	0.819	0.819	0.820	0.820	0.820	0.821	0.821	0.821
City of De Kalb												
TWDB Projections (2016 Reg. D Water Plan)	0.25	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
TWDB Projections (2021 Draft Reg. D Water Plan)	0.24	0.26	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
GPCD based on TWDB 2021 Draft Pop. & Water Demand Proj.		154	152	149	148	146	146	145	145	145	145	145
Average day water demand (2010 & 2015 reported by TWU)	0.210	0.211	0.213	0.214	0.216	0.217	0.218	0.220	0.221	0.223	0.224	0.226
Maximum day water demand (TWU data & WTP peaking factor)	0.307	0.309	0.311	0.313	0.315	0.317	0.319	0.321	0.323	0.325	0.327	0.330
City of Hooks (Burns-Redbank WSC water demands included for sizing of infrastructure but not included in TWDB 2021 draft pop/water demand revision request for City of Hooks; BRWSC represent 39% of City's total water purchased from TWU in 2												
TWDB Projections (2016 Reg. D Water Plan)	0.30	0.24	0.23	0.23	0.23	0.22	0.22	0.22	0.22	0.22	0.22	0.22
TWDB Projections (2021 Draft Reg. D Water Plan)	0.30	0.24	0.23	0.23	0.23	0.22	0.22	0.22	0.22	0.22	0.22	0.22
GPCD based on TWDB 2021 Draft Pop. & Water Demand Proj.		82	80	78	77	75	74	73	73	73	73	73
Average day water demand (2010 & 2015 reported by TWU)	0.275	0.290	0.306	0.324	0.342	0.361	0.361	0.361	0.361	0.361	0.361	0.361
Maximum day water demand (TWU data & WTP peaking factor)	0.401	0.423	0.447	0.473	0.499	0.527	0.527	0.527	0.527	0.527	0.527	0.527
City of Leary												
Average day water demand (2010 & 2015 reported by TWU)	0.050	0.053	0.055	0.058	0.061	0.064	0.067	0.071	0.075	0.075	0.075	0.075
Maximum day water demand (TWU data & WTP peaking factor)	0.073	0.077	0.081	0.085	0.089	0.094	0.098	0.104	0.109	0.109	0.109	0.109
City of Maud												
TWDB Projections (2016 Reg. D Water Plan)	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
TWDB Projections (2021 Draft Reg. D Water Plan)	0.14	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
GPCD based on TWDB 2021 Draft Pop. & Water Demand Proj.		139	136	134	132	131	130	129	129	129	129	129
Average day water demand (2010 & 2015 reported by TWU)	0.130	0.133	0.136	0.139	0.142	0.145	0.145	0.145	0.145	0.145	0.145	0.145
Maximum day water demand (TWU data & WTP peaking factor)	0.190	0.194	0.198	0.203	0.207	0.212	0.212	0.212	0.212	0.212	0.212	0.212
City of Nash												
TWDB Projections (2016 Reg. D Water Plan)	0.23	0.18	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
TWDB Projections (2021 Draft Reg. D Water Plan)	0.23	0.19	0.19	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20

	Water Demands (MGD)											
Entity	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**	**2055**	**2060**	**2065**	**2070**
GPCD based on TWDB 2021 Draft Pop. & Water Demand Proj.		60	60	60	60	60	60	60	60	60	60	60
Average day water demand (2010 & 2015 reported by TWU)	0.260	0.272	0.284	0.297	0.311	0.325	0.340	0.356	0.356	0.356	0.356	0.356
Maximum day water demand (TWU data & WTP peaking factor)	0.380	0.397	0.415	0.434	0.454	0.475	0.497	0.520	0.520	0.520	0.520	0.520
City of New Boston												
TWDB Projections (2016 Reg. D Water Plan)	1.00	0.98	0.98	0.99	0.98	0.98	0.98	0.97	0.97	0.97	0.97	0.97
TWDB Projections (2021 Draft Reg. D Water Plan)	1.13	1.24	1.24	1.25	1.24	1.24	1.23	1.23	1.23	1.23	1.23	1.23
GPCD based on TWDB 2021 Draft Pop. & Water Demand Proj.		208	206	204	202	200	200	199	199	199	199	199
Average day water demand (2010 & 2015 reported by TWU)	0.950	0.964	0.978	0.993	1.008	1.023	1.023	1.023	1.023	1.023	1.023	1.023
Maximum day water demand (TWU data & WTP peaking factor)	1.387	1.408	1.428	1.450	1.471	1.493	1.493	1.493	1.493	1.493	1.493	1.493
City of Red Lick												
TWDB Projections (2016 Reg. D Water Plan)	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10
Average day water demand (based on gpcd)	0.124	0.136	0.147	0.159	0.171	0.178	0.178	0.178	0.178	0.178	0.178	0.178
Maximum day water demand	0.181	0.198	0.215	0.233	0.250	0.259	0.259	0.259	0.259	0.259	0.259	0.259
City of Redwater												
TWDB Projections (2016 Reg. D Water Plan)	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
TWDB Projections (2021 Draft Reg. D Water Plan)	0.24	0.37	0.37	0.37	0.37	0.37	0.37	0.36	0.36	0.36	0.36	0.36
GPCD based on TWDB 2021 Draft Pop. & Water Demand Proj.		120	119	117	115	114	113	112	112	112	112	112
Average day water demand (2010 & 2015 reported by TWU)	0.290	0.302	0.315	0.329	0.343	0.357	0.372	0.388	0.405	0.405	0.405	0.405
Maximum day water demand (TWU data & WTP peaking factor)	0.423	0.441	0.460	0.480	0.500	0.522	0.544	0.567	0.591	0.591	0.591	0.591
City of Texarkana (Texas)												
TWDB Projections (2016 Reg. D Water Plan)	8.59	11.40	11.49	11.57	11.56	11.55	11.52	11.49	11.48	11.47	11.47	11.47
TWDB Projections (2021 Draft Reg. D Water Plan)	6.21	6.64	6.69	6.74	6.73	6.72	6.71	6.69	6.68	6.68	6.68	6.68
GPCD based on TWDB 2021 Draft Pop. & Water Demand Proj.		176	174	173	172	172	171	171	171	170	170	170
Average day water demand (2010 & 2015 reported by TWU)	6.500	6.641	6.785	6.932	7.082	7.236	7.393	7.553	7.717	7.884	8.055	8.230
Maximum day water demand (TWU data & WTP peaking factor)	9.490	9.696	9.906	10.121	10.340	10.565	10.794	11.028	11.267	11.511	11.761	12.016
City of Texarkana (Arkansas)												
Average day water demand (2010 & 2015 reported by TWU)	3.880	3.937	3.994	4.052	4.111	4.171	4.232	4.294	4.356	4.420	4.484	4.550
Maximum day water demand (TWU data & WTP peaking factor)	5.665	5.747	5.831	5.916	6.003	6.090	6.179	6.269	6.360	6.453	6.547	6.643
City of Wake Village												
TWDB Projections (2016 Reg. D Water Plan)	0.62	0.60	0.60	0.60	0.59	0.58	0.58	0.57	0.57	0.57	0.57	0.57
TWDB Projections (2021 Draft Reg. D Water Plan)	0.62	0.61	0.61	0.60	0.60	0.59	0.59	0.58	0.58	0.58	0.58	0.58
GPCD based on TWDB 2021 Draft Pop. & Water Demand Proj.		101	100	98	96	95	94	93	93	93	93	93
Average day water demand (2010 & 2015 reported by TWU)	0.480	0.499	0.519	0.540	0.562	0.585	0.608	0.633	0.658	0.685	0.685	0.685
Maximum day water demand (TWU data & WTP peaking factor)	0.701	0.729	0.758	0.789	0.821	0.854	0.888	0.924	0.961	0.999	0.999	0.999
TexAmericas Center (Potable Water Demand)												
TWDB Projections (2016 Reg. D Water Plan)	0.23	0.46	0.46	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
TWDB Projections (2021 Draft Reg. D Water Plan)	0.23	0.47	0.47	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48
GPCD based on TWDB 2021 Draft Pop. & Water Demand Proj.		861	859	858	856	855	853	852	852	852	852	852
Average day water demand (2010 & 2015 reported by TWU)	0.760	0.763	0.766	0.769	0.772	0.775	0.775	0.775	0.775	0.775	0.775	0.775
Maximum day water demand (TWU data & WTP peaking factor)	1.110	1.114	1.118	1.122	1.127	1.131	1.131	1.131	1.131	1.131	1.131	1.131
TexAmericas Center (Raw Water Demand)												
Average day water demand (based on potential industry requests)	0.00	30.00	41.75	53.50	56.45	59.40	63.05	66.70	70.40	74.10	77.75	81.40
Total Average Day Water Demand (Municipal; based on TWU data & pop. average annual growth rate)**	**12.08**	**12.59**	**12.90**	**13.22**	**13.55**	**13.88**	**14.17**	**14.47**	**14.73**	**14.97**	**15.19**	**15.42**
Total Maximum Day Water Demand (Municipal)**	**17.63**	**18.38**	**18.83**	**19.30**	**19.78**	**20.26**	**20.69**	**21.13**	**21.50**	**21.85**	**22.18**	**22.51**

** City of Texarkana (AR) demands not included in total

APPENDIX E

TWDB-Industrial Projections Revision Request Memorandum

SUSAN ROTH
water and wastewater consulting

SUSAN ROTH
water and wastewater consulting

Memorandum

Riverbend Water Resources District – TexAmericas Center Water Demand Projections for Region D 2021 Draft Water Plan

TO: *Liz Fazio Hale, J.D., LL.M.*

CC: *Tony Smith, P.E.*

FROM: *Susan K. Roth, P.E.*

DATE: *December 19, 2017*

REVISION REQUEST FOR WATER DEMAND PROJECTIONS – TEXAMERICAS CENTER

Riverbend Water Resources District (RWRD) was created by the Texas Legislature in 2009 to conserve and develop water resources in order to control, store, preserve and distribute water to their Member Entities. RWRD is currently conducting a regional water master plan for the following fifteen entities: Central Bowie County Water Supply Corporation; Cities of Annona, Atlanta, Avery, Clarksville, De Kalb, Hooks, Leary, Maud, Nash, New Boston, Redwater, Texarkana (Texas), Wake Village; and TexAmericas Center.

RWRD is requesting a revision of the non-municipal water demand projections for the 2021 Draft Region D Water Plan for TexAmericas Center (TAC), as a lack of current water supplies to the footprint has detrimentally impacted the growth and development of the industrial park. A summary of the projected raw water demands for TAC are summarized below in Table 1:

Table 1 – Water Demand Projections for TexAmericas Center

Year	Raw Water Demand (MGD)	Raw Water Demand (AC-FT)
2020	30.0	33,604
2030	53.3	59,928
2040	59.4	66,509
2050	66.7	74,735
2060	74.1	82,961
2070	81.4	91,187

On May 1, 2016, Riverbend Water Resources District acquired the wet utilities (water and wastewater) from TAC and took responsibility for the wet utility contract with Red River Army Depot. Based on their contractual agreement, RWRD is required to construct the necessary infrastructure to deliver to TAC not less than 6 million gallons per day (MGD) of raw, non-potable water by May 1, 2026 and then an additional 19 MGD of raw, non-potable water thereafter for a total of 25 MGD. TAC showed their commitment to the delivery of

raw water to their footprint when they transferred their wet utility system (a $14 million asset) and wet utility contract with Red River Army Depot ($129 million over 30 years) to RWRD; the negotiation of the transfer took approximately two years to complete.

The terms of the agreement included RWRD purchasing the wet utilities for $10,000; TAC also agreed to loan RWRD $900,000 in cash (interest free for a year) and had to restrict $3,000,000 in cash for two years on a Performance Bond with Red River Army Depot to guaranty RWRD's performance under the wet utility contract.

We feel that it's important to note that the RWRD Board recently approved a revised contractual agreement with TAC to provide the necessary raw water supply in order to meet the projections outlined in the table above (reference Attachment A).

Founded in 1997, TAC owns and operates one of the largest mixed-use industrial parks in the United States. With approximately 12,000 acres of contiguous and shovel-ready land, TAC is prime for development; TAC is located in the Texarkana metropolitan area and serves the Arkansas, Louisiana, Oklahoma, and Texas markets. The Texas Economic Development Council has designated acreage on the TAC Central Campus as the first S.T.A.R. Site in Texas (sites that are ready for construction to be initiated), which provides private businesses and corporations with flexible and cost-effective alternatives.

TAC has utility infrastructure in place and recently added gas and fiber service; however, the primary utility service they are lacking is an adequate supply of raw and treated surface water. From 2011-2016, TAC has received numerous requests from potential industrial and commercial customers for potable and raw water supply. This list of potential prospects identified an additional 30 MGD (million gallons a day) of water demand from today through the next several years at TAC and is projected to double to 60 MGD in the next 20+ years; reference Attachment B for copies of a few of the proposal correspondence and RFQs to view as examples. Additional potential industries have continued to contact TAC in 2017 (reference Attachment B); however, TAC is not able to fulfill their raw water requests.

TAC is located in one of the most heavily traveled corridors in the country with access to Union Pacific Railroad and Interstates 30, 49 and 69. The US 59/I-69/I-369 transportation route is a major corridor for through commerce for many types of industries in Northeast Texas, including the timber/forest products industry. As a result of the recently expanded Panama Canal in 2016, the I-69/I-369 transportation route will largely follow the current route of US 59 and will run from the most southern part of Texas to the most northeastern part of Texas, directly through Cass and Bowie Counties and the City of Texarkana, Texas. The Bowie County Judge has been actively involved with coordination efforts to augment I-69/I-369 with a high-speed freight rail system that will come north from the Gulf of Mexico ports.

Texarkana Union Station is located in downtown Texarkana and has daily Amtrak service west to Los Angeles through Dallas, San Antonio and El Paso, and service east to Chicago through Little Rock and St. Louis. Texarkana Regional Airport provides general aviation service to the DFW International Airport.

In addition to the availability of contiguous land and the transportation corridor, TAC has access to a skilled workforce and laborers. Texarkana is home to Texas A&M University-Texarkana, a four-year branch of the Texas A&M University System, as well as Texarkana College, a community college.

BACKGROUND AND ONGOING EFFORTS OF TEXAMERICAS CENTER

TexAmericas Center (TAC) was created in 1997 after a base realignment and closure process that allowed the area to accept land from the federal government at Red River Army Depot when the government downsized the installation. As a result, TAC, a State of Texas redevelopment authority, was formed and charged with the responsibility of developing the footprint's land for industrial and commercial uses.

In early 2016, TAC Central Campus was close to reaching full occupancy of available building and site space for lease, which prompted TAC to create a 'Construction Trailer Park' from an unutilized area of campus property. The new trailer park site offers a total of fifteen 12-ft pads and provides tenants a move-in ready option for locating office trailers to the footprint. This trailer park site has created a viable and cost-effective option for businesses doing contract work for the Red River Army Depot. TAC then received an Economic Development Administration (EDA) Grant for $150,000 in November 2016 to develop a Master Plan that involves property assessments and planning services outlined in the grant. This comprehensive planning strategy will position TAC to strategically redevelop selected portions of their 12,000 acres with targeted industries in mind.

In 2016, TAC partnered with a Colorado firm, McCarthy-Blansett Group (MBG) to complete the final phase of the Office of Economic Adjustment (OEA) grant, awarded to Workforce Solutions Northeast Texas, to conduct an analysis of the Greater Texarkana region. As the grant administrator, TAC worked with Workforce Solutions Northwest Texas to identify and reach out to regional leaders to help with the assessment. The results from this study identified an urgent need for the Texarkana region to move forward with establishing a regional economic development program. The three priority recommendations within the plan include:

1. Establish a new regional entity as the Greater Texarkana Corporation (GTC) under the Texarkana Chamber of Commerce.
2. Hold a vision to create a pre-determined, aggressive amount of primary jobs for the region in 10 years and place the Texarkana MSA back in the top half of MSAs nationally on the Policom index of economic strength.
3. Support regionalization on all fronts and levels through a collaborative professional network of municipal, county and regional economic and workforce development professionals.

Following completion of the study, TAC received their HUB Zone designation in May 2017 during Economic Development Week by the International Economic Development Council (IEDC). Congressman John Ratcliffe also announced an important economic development initiative during Economic Development Week. He stated that having access to defense industry support tools for our local companies will only enhance the attractiveness of the Greater Texarkana area, especially should the White House administration be successful at growing the defense budget over the coming years.

In addition, the Foote Consulting Group (FCG) recently released their report, *Texarkana Region Workforce Target Analysis*, and also announced that the Greater Texarkana region is attractive and ready for business growth. According to their analysis, the Greater Texarkana region displays overall strength in every criteria used by site selectors internationally to identify locations for new or expanding businesses, which include the following: Transportation/Logistics, Labor Costs, Labor Availability and Quality, Electric Power, Sites and Buildings, Incentives/Taxes, Quality of Life/Cost of Living, and

Education/Training. The report states that the Greater Texarkana region is not only ready for business growth but competitive among similar benchmark locations.

Despite the limited supply of treated and raw water, TAC has continued to sign a few leases in May and August 2017. Jackson Melons, Inc., headquartered in Henderson, Texas, occupies warehouse space on the TAC East Campus, consisting of 22,500 square feet. TAC also has a new tenant on their Central Campus, El Dorado Glass and Mirror Co., Inc., with a lease for approximately 4,750 square feet.

METHODOLOGY AND EXAMPLE MODEL ENTITIES

In order to determine TAC's future growth and water demands for the 2021 Region D Water Plan, other industrial parks were researched and evaluated as a potential model for comparison purposes to TAC. These research factors, similar to those of TAC, included the following:

- Land availability;
- Contiguous land availability;
- Shovel ready availability;
- Skilled laborers availability;
- Low-attainment issues and air quality availability;
- Transportation corridor availability;
- Interest of past and current industry;
- Any contracts in-place currently and for future needs;
- Previous industry located on the footprint;
- Similar projects in other areas within our own region and growth rates and water demand needs, and,
- Similar projects in other areas outside of our region and their growth rates and water demand needs.

Other community factors considered in the evaluation process included the following:

- High ranked schools;
- Community and four-year colleges;
- Trade schools;
- Family-oriented community; and,
- Care for young and elderly.

In developing the methodology, projections and justification of future water needs for TAC in the Texarkana area, two existing industrial parks were identified as example models to follow for planning purposes: MidAmerica Industrial Park and Chaffee Crossing.

MidAmerica Industrial Park (Pryor, Oklahoma)

Based on our research and my extensive discussion with Larry Williams (General Manager), my team and I determined that MidAmerica Industrial Park would be an excellent and conservative model to follow for projecting TAC's future growth and water demands due to the numerous similarities between the two entities (reference Attachment C).

MidAmerica Industrial Park was developed by the Department of Defense in World War II during 1940 to serve as an ammunitions facility. By 1978, the army depot downsized and left a footprint of 9,000 acres. At that time, the footprint of the park started with 3 industrial and commercial customers with a water demand of 30 MGD. Today, MidAmerica Industrial

Park is Oklahoma's largest industrial park. The park is located approximately 148 miles outside of Oklahoma City in Pryor Creek, Oklahoma. Currently, MidAmerica Industrial Park has 80 companies on site, including operations of seven Fortune 500 companies.

We believe that this industrial park has numerous similarities like the TAC footprint and serves as a direct model for the development of TAC (see Table 2 below). This component of the methodology further supports the numbers that are being projected for future water demands for TAC from 2020 through 2070. It is important to note that the methodology for industrial and commercial demands are typically developed on a case-by-case basis.

Table 2 – Similarities between TAC and MidAmerica Industrial Park

Comparison Factors	TexAmericas Center (TAC)	MidAmerica Industrial Park
Largest Industrial Park	Texas	Oklahoma
Size of Park (Acres) for Industrial Customers	12,000	9,000
Distance from Similar Size Metropolitan Area	Located approx. 145 miles from Little Rock (AR) along I-30 Corridor	Located approx. 148 miles from Oklahoma City (OK)
Origin of Development	Developed in early 1940s as a military ordnance depot; later served munitions produced & military vehicle maintenance	Developed by Dept. of Defense in 1940 to serve Ammunitions Facility
Beginning of Growth/WTP Expansion History	Riverbend WRD acquired wet utilities on May 1, 2016	1978 (20 to 30 MGD Exp.); 1983 (30 to 40 MGD Exp.) Mid 1990s (40 to 50 MGD Exp.)
Number of Industrial Companies at Park	3	80 (Initially 3 in 1978)

Chaffee Crossing Industrial Park (Fort Smith, Arkansas)

Chaffee Crossing would be another conservative model to follow for projecting TAC's future growth and water demands due to the numerous similarities between the two entities (reference Attachment D).

During 1995, the Base Realignment and Closure Commission recommended the closure of Fort Chaffee. Several ranges and training areas were kept as a sub-installation of Fort Sill. The federal government identified 7,192 of Fort Chaffee's 76,075 acres as surplus property and turned them over for redevelopment. The remaining acreage was given to the Arkansas National Guard. As a result, the Fort Chaffee Redevelopment Authority was established in September 1997 to redevelop approximately 7,000 acres, known as 'Chaffee Crossing,' that had been turned over for non-military use. The City of Fort Smith is the primary utility provider for water and wastewater services to Chaffee Crossing.

When construction of the extension of the future Interstate 49 was initiated, redevelopment of Chaffee Crossing started to occur. Since then, companies with large facilities, such as Rowe Sheet Metal, Walter Arms, Phoenix Metals, Mars Pet Care, Affinity Chemical, Graphic Packaging and Glatfelter have relocated at Chaffee Crossing. In addition, the industrial and

manufacturing growth has spurred residential growth in the Fort Smith area; 24 new subdivisions and neighborhood developments have been completed along with 2,300 additional housing units planned for construction. Chaffee Crossing is now marketing itself as 'the economic engine of western Arkansas' and viewed as a model across the U.S. regarding the closure of military bases.

We believe that this industrial park also has numerous similarities like the TAC footprint and serves as a direct model for the development of TAC if ample water supply is available for TAC (see Table 3 below). This component of the methodology further supports the numbers that are being projected for future water demands for TAC from 2020 through 2070.

Table 3 – Similarities between TAC and Chaffee Crossing

Comparison Factors	TexAmericas Center (TAC)	Chaffee Crossing
Industrial Park Location	Texarkana, Texas	Fort Smith, Arkansas
Size of Park (Acres) for Industrial Customers	12,000	7,000
Origin of Development	Developed in early 1940s as a military ordnance depot; later served munitions produced & military vehicle maintenance	Developed in 1941 for military combat training; established as U.S. Army Training Center for Field Artillery in 1956
Beginning of Growth/ Water Demand History	Riverbend WRD acquired wet utilities on May 1, 2016	2005 (1.0 MGD); 2010 (21.5 MGD) 2017 (68.2 MGD)
Number of Industrial Companies at Park	3	9 (Initially 1 in 2005)

APPENDIX F

USACE Contracts

SUSAN ROTH
water and wastewater consulting

(77) 50/(8) 1/11/67

Contract No. DA-16-047-eng-2033

Date: 28 May 1953

ARTICLES OF AGREEMENT

BETWEEN

THE UNITED STATES OF AMERICA

AND

THE CITIES OF TEXARKANA, TEXAS AND ARKANSAS

FOR: RESERVING STORAGE CAPACITY AT TEXARKANA DAM FOR DOMESTIC AND INDUSTRIAL WATER SUPPLY.

LOCATION: CASS AND BOWIE COUNTIES, TEXAS

This agreement is authorized by the Flood Control Act of 22 December 1944 (Public Law 534, 78th Congress), as revived and reenacted by Public Law 360, 82nd Congress, 2nd Session, approved May 23, 1952.

Contract No. DA-16-047-eng-2033

ARTICLES OF AGREEMENT
BETWEEN
THE UNITED STATES OF AMERICA
AND
THE CITIES OF TEXARKANA, TEXAS AND ARKANSAS

THIS AGREEMENT, entered into this 28th day of May 1953, by and between the UNITED STATES OF AMERICA (hereinafter called the Government) represented by the Contracting Officer executing this agreement and the CITIES OF TEXARKANA, Texas and Arkansas, in the County of Bowie and State of Texas, and in the County of Miller and State of Arkansas, respectively, (hereinafter called the Municipalities) represented by their Mayors duly authorized by resolution of the City Council of the City of Texarkana, Texas, passed and adopted on the 14th day of April, 1953; and by resolution of the City Council of the City of Texarkana, Arkansas, passed and adopted on the 9th day of December 1952, WITNESSETH THAT:

WHEREAS, the Government, pursuant to the Flood Control Act of 24 July 1946 (Public Law 526, 79th Congress, 2nd Session), is engaged in constructing, and thereafter will maintain and operate, the Texarkana Dam on the Sulphur River in Cass and Bowie Counties, Texas (hereinafter called the Project); and

WHEREAS, the Flood Control Act of 22 December 1944 (Public Law 534, 78th Congress, 2nd Session) as revived and reenacted by Public Law 360, 82nd Congress, 2nd Session, approved May 23, 1952, provides, inter alia, as follows:

> "Sec. 6 That the Secretary of War is authorized to make contracts with States, municipalities, private concerns, or individuals, at such prices and on such terms as he may deem reasonable, for domestic and industrial uses for surplus water that may be available at any reservoir under the control of the War Department; Provided, That no contracts for such water shall adversely affect then existing lawful uses of such water ***"; and

WHEREAS, it has been determined that Texarkana Reservoir can be operated in such a manner as to make available a dependable supply of water in the amount of 40 acre-feet (or 13,000,000 gallons) per day without appreciably affecting its usefulness for other planned purposes; and

WHEREAS, the Municipalities under their corporate powers have authority to contract for water supply and to distribute water for domestic and other uses within their municipal boundaries; and

WHEREAS, the Municipalities desire an additional water supply of 40 acre-feet (or 13,000,000 gallons) per day and stand ready to spend substantial sums of money for the construction of facilities necessary for the utilization of the water; and

WHEREAS, the Government and the Municipalities desire to enter into an agreement whereby the Government will permit the Municipalities to draw water from the said Project for domestic and other uses upon the terms and conditions hereinafter set forth;

NOW, THEREFORE, the parties hereto do mutually agree as follows:

ARTICLE 1. Term of Agreement. This agreement shall become effective on the date of its written approval by the Secretary of the Army and shall remain in full force and effect for a period of fifty years thereafter or until termination of the useful life of the Project, or as otherwise provided herein, whichever shall first occur.

ARTICLE 2. Storage and Use of Water. (a) Upon completion of construction of the Project, the Government, in order to meet the water supply demand of 13,000,000 gallons per day of the Municipalities, will reserve the following storage space above that required to maintain a minimum pool at elevation 220.0 msl and to supply minimum stream flow:

Month	Storage in Acre-feet	Month	Storage in Acre-feet
January	1,100	July	9,800
February	200	August	7,900
March	1,900	September	6,000
April	13,400	October	4,600
May	13,200	November	3,300
June	11,200	December	2,200

(b) The Municipalities shall have the right to withdraw from the reservoir a quantity of water for domestic and industrial uses not to exceed the average daily rate given in the following tabulation when the storage reserved for water supply is at or less than the storage given in subparagraph (a) of ARTICLE 2 provided that such right shall not be cumulative, that is, that the failure of the Municipalities to withdraw the allowable limit for any given period shall not increase the allowable quantity for any succeeding period; and provided further that the right of the Municipalities to withdraw water as provided herein shall be subject in all respects to the right of the Government to operate the Project in any manner it may find advisable from an overall viewpoint provided storage space is reserved as provided in subparagraph (a) of Article 2.

Period of Year	Maximum allowable average daily rate in million gallons
Jan 1 to last day in Feb. (incl.)	9.8
Mar. 1 to June 16 (incl.)	13.0
June 17 to July 31 (incl.)	15.6
Aug. 1 to Aug. 31 (incl.)	17.9
Sept. 1 to Sept. 16 (incl.)	15.6
Sept. 17 to Oct. 31 (incl.)	13.0
Nov. 1 to Dec. 31 (incl.)	11.4

(c) When the storage in the reservoir is greater than the storage given in subparagraph (a) of ARTICLE 2, the Municipalities may with the consent of the Government withdraw water in excess of the agreed amount provided it does not interfere with the operation of the Project for other purposes.

(d) The Municipalities shall utilize said water in a manner consistent with applicable Federal and State laws and regulations.

ARTICLE 3. Water Supply Facilities. The Municipalities shall furnish, install, maintain and operate at their own expense the necessary intake structure, pumping station, pipe lines, metering equipment and incidental facilities for withdrawal of water as provided for herein.

ARTICLE 4. Measurement and Reports. Metering equipment to measure the quantity of water drawn from reservoir storage by the Municipalities will be installed by the Municipalities on the intake line from the reservoir and daily records thereof will be made available to the District Engineer and a monthly report will be furnished to the District Engineer not later than five (5) days after the end of each calendar month.

ARTICLE 5. Default. In the event that the Municipalities fail to exercise their right of withdrawal of water from the reservoir as provided for herein within a period of 5 years from the effective date of this agreement or fail to comply with any or all of the terms of this agreement, the Government at its option may terminate the agreement without cost to the Government.

ARTICLE 6. Right of Way. The Government will grant to the Municipalities by separate instrument for the duration of this agreement an easement for a right of way for the construction, operation and maintenance of the facilities necessary for the withdrawal of water as provided for herein subject to the following conditions:

(1) The location and plan of construction of the facilities constructed by the Municipalities within the Project limits shall be subject to the approval of the District Engineer.

(2) The installation, operation and maintenance of said facilities shall be accomplished without cost or expense to the Government under the general supervision and subject to the approval of the said District Engineer, and in such manner as not to endanger personnel or property of the Government or obstruct travel on any road thereon.

(3) The use and occupation of said land incident to the exercise of the easement shall be subject to such rules and regulations as the said District Engineer may from time to time prescribe.

(4) The Municipalities shall supervise the said facilities and cause them to be inspected at reasonable intervals, and shall immediately repair any defects found therein as a result of such inspection, or when

requested by said District Engineer to repair any defects. Upon completion of the installation of said facilities and the making of any repairs thereto, the premises shall be restored immediately by the Municipalities at their own expense to the same condition as that in which they existed prior to the commencement of such work.

(5) Any property of the Government damaged or destroyed by the Municipalities incident to the use and occupation of the said premises, shall be promptly repaired or replaced by the Municipalities to the satisfaction of the said District Engineer or in lieu of such repair or replacement the Municipalities shall, if so required by the said District Engineer, pay to the Government money in an amount sufficient to compensate for the loss sustained by the Government by reason of damages to or destruction of Government property.

(6) The Government reserves the right to enter upon the said premises at any time and for any purpose necessary or convenient in connection with river and harbor and flood control work, and to construct, use, and maintain across, over, and/or under the said right of way, roads, electric transmission, telephone, telegraph, water, gas, gasoline, oil, and sewer lines, and other facilities, in such manner as not to create any unreasonable interference with the use of the said right of way.

(7) The Government shall not be responsible for damages to property or injuries to persons which may arise from or be incident to the use and occupation of the said premises, nor for damages to the property of the Municipalities, nor for damages to the property or injuries to the person of the Municipalities' officers, agents, servants, or employees, or others who may be on said premises at their invitation or the invitation of any one of them, arising from governmental activities, and the Municipalities shall hold the Government harmless from any and all such claims.

(8) The Government shall not be responsible for damages to property or injuries to persons which may arise from or be incident to the construction, maintenance, and use of said facilities.

(9) The said easement may be annulled and forfeited by declaration of the Secretary of the Army for failure of the Municipalities fully and promptly to comply with any and all of the provisions and conditions of the said easement, or for nonuse, or for abandonment.

(10) All uranium, thorium, and all other materials determined pursuant to section 5(b)(1) of the Atomic Energy Act of 1946 (60 Stat. 761) to be peculiarly essential to the production of fissionable material, contained, in whatever concentration, in deposits in the lands covered by this instrument are hereby reserved for the use of the United States, together with the right of the United States through its authorized agents or representatives at any time to enter upon the land and prospect for, mine, and remove the same, making just compensation for any damage or injury occasioned thereby. However such land may be used, and any rights otherwise acquired by this disposition may be exercised, as if no reservation of such materials had been made; except that, when such use results in the extraction of any

such material from the land in quantities which may not be transferred or delivered without a license under the Atomic Energy Act of 1946, as it now exists or may hereafter be amended, such material shall be the property of the United States Atomic Energy Commission, and the Commission may require delivery of such material to it by any possessor thereof after such material has been separated as such from the ores in which it was contained. If the Commission requires the delivery of such material to it, it shall pay to the person mining or extracting the same, or to such other person as the Commission determines to be entitled thereto, such sums, including profits, as the Commission deems fair and reasonable for the discovery, mining, development, production, extraction, and other services performed with respect to such material prior to such delivery, but such payment shall not include any amount on account of the value of such material before removal from its place of deposit in nature. If the Commission does not require delivery of such material to it, the reservation hereby made shall be of no further force or effect.

(11) Upon the expiration, termination, or annulment and forfeiture of the easement, the Municipalities shall, without expense to the Government, and within such time as the Secretary of the Army may indicate, remove the said facilities from said land and restore the premises to a condition satisfactory to the said District Engineer. In the event the Municipalities shall fail, neglect, or refuse to remove the said facilities and so restore the premises, the Government shall have the option either to take over the said facilities as the property of the Government, without compensation therefor, or to remove the said facilities and perform the restoration work as aforesaid at the expense of the Municipalities, and in no event shall the Municipalities have any claim for damages against the Government or its officers or agents, on account of the taking over of said facilities or on account of their removal.

ARTICLE 7. Consideration. The Municipalities shall pay to the Government annually in advance on 1 January the sum of $7,000.00 in consideration for reserving storage capacity and the right to withdraw water in accordance with the provisions of this agreement. Payment in the initial year will be prorated for the unexpired portion of that year from the date of initial payment. The date of initial payment will be determined as the date on which notification is given by the Government that water is available for withdrawal or the date on which the withdrawal facilities are completed by the Municipalities, whichever date is the later; provided, however, that in no case shall the date of initial payment be delayed by the Municipalities for a period to extend beyond 5 years from the effective date of this agreement in accordance with the provisions of Article 5, "Default" hereof.

ARTICLE 8. No Warranties as to Quality of Water. The parties hereto recognize that the water being made available to the Municipalities under the terms of this agreement is raw reservoir water. The Government makes no representations with respect to the condition or the potability of the water, and assumes no responsibility therefor or for treatment of the water, or for undertaking any action which might tend to reduce contamination from the reservoir or from other sources in the watershed.

ARTICLE 9. Implied Rights. The rights moving to the Municipalities by virtue of the terms of this agreement shall not be subject to any interpretation making them incompatible with Federal uses and purposes of the Project and no rights are to be implied hereunder which, in the opinion of the Secretary of the Army or his duly authorized representative, would be incompatible with Federal uses and purposes.

ARTICLE 10. Transfer or Assignment. The Municipalities shall not transfer or assign this agreement or any part thereof, nor grant any interest, privilege, or license whatsoever in connection with this agreement, without permission in writing from the Secretary of the Army; provided, that this restriction shall not be construed to apply to any water which may be obtained from the storage volume by the Municipalities and furnished to any third party or parties nor any method of allocation thereof.

ARTICLE 11. Disputes. Except as otherwise provided in this agreement any dispute concerning a question of fact arising under this agreement which is not disposed of by agreement shall be decided by the Contracting Officer, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the Contractor. Within 30 days from the date of receipt of such copy, the Contractor may appeal by mailing or otherwise furnishing to the Contracting Officer a written appeal addressed to the Secretary, and the decision of the Secretary or his duly authorized representative for the hearing of such appeals shall, unless determined by a court of competent jurisdiction to have been fraudulent, arbitrary, capricious, or so grossly erroneous as necessarily to imply bad faith, be final and conclusive; provided that, if no such appeal is taken, the decision of the Contracting Officer shall be final and conclusive. In connection with any appeal proceeding under this clause, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of its appeal. Pending final decision of a dispute hereunder, the Contractor shall proceed diligently with the performance of the agreement and in accordance with the Contracting Officer's decision.

ARTICLE 12. Convict Labor. In connection with the performance of this agreement, the Municipalities agree not to employ any person undergoing sentence of imprisonment at hard labor.

ARTICLE 13. Non-discrimination in Employment. In connection with the performance of this agreement, the Municipalities agree not to discriminate against any employee or applicant for employment because of race, creed, color, or national origin; and further agree to insert the foregoing provision in all subcontracts hereunder except subcontracts for standard commercial supplies or for raw materials.

ARTICLE 14. Covenant Against Contingent Fees. The Municipalities warrant that no person or selling agency has been employed or retained to solicit or secure this agreement upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Municipalities for the purpose of securing business. For breach or

violation of this warranty the Government shall have the right to annul this agreement without liability or in its discretion to amend the amount of such commission, percentage, brokerage, or contingent fee; and upon such demand, the Municipalities shall promptly pay such amount to the Government.

ARTICLE 15. Officials Not to Benefit. No member of or delegate to Congress, or resident Commissioner, shall be admitted to any share or part of this agreement, or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this agreement if made with a corporation for its general benefit.

ARTICLE 16. Performance by Government Contingent Upon Appropriations. The performance by the Government of its obligations under this agreement is subject to the availability of appropriations by Congress applicable to the performance of those obligations.

ARTICLE 17. Approval. This agreement shall be subject to the written approval of the Secretary of the Army and shall not be binding until so approved.

ARTICLE 18. Definitions. (a) The term "Secretary" means the Secretary of the Army; the terms "Secretary of the Army" or "Head of the Department" as used herein shall have one and the same meaning; and the term "his duly authorized representative" means the Chief of Engineers, Department of the Army, or an individual or board designated by him.

(b) Except for the original signing of this agreement and except as otherwise stated herein, the term "Contracting Officer" as used herein shall include his duly appointed successor or his authorized representative.

*

IN WITNESS WHEREOF, The parties hereto have executed this agreement as of the day and year first above written.

(Dated by rubber stamp "February 16, 1954")

THE UNITED STATES OF AMERICA

(s) Robert T. Stevens
Secretary of the Army

By C. T. Tench

Attest:

Norman J. Kroencke

L. R. Matthias

W. Myers

L. E. Gilliland

CITY OF TEXARKANA, TEXAS

By Carroll L. Shiffer
Mayor

CITY OF TEXARKANA, ARKANSAS

By B. R. McCarley
Mayor

*(c) The term "District Engineer" as used herein shall mean the District Engineer, Corps of Engineers, U. S. Army, in charge of the project.

DACW29-69-C-0019

633

CONTRACT BETWEEN THE UNITED STATES OF AMERICA
AND
THE CITY OF TEXARKANA, TEXAS
FOR
RESERVING WATER SUPPLY STORAGE SPACE
IN
TEXARKANA RESERVOIR

565

$3.50

Interim

THIS CONTRACT, entered into this 16th day of September 19 68 by and between the UNITED STATES OF AMERICA (hereinafter called the "Government"), represented by the Contracting Officer executing this contract, and the City of Texarkana, Texas, a municipal corporation existing under the laws of Texas, with its principal office in the city of Texarkana, Bowie County, Texas (hereinafter called the "City"), WITNESSETH THAT:

WHEREAS, the Government, pursuant to the Flood Control Act of 24 July 1946 (Public Law 526, 79th Congress, 2d Session), has constructed and operates and maintains the Texarkana Reservoir on the Sulphur River in Cass and Bowie Counties, Texas; and,

WHEREAS, the authorization for the Texarkana Reservoir provides for flood control through flood control storage space in the reservoir; and,

WHEREAS, the cities of Texarkana, Texas and Arkansas (hereinafter called the "Cities"), entered into a contract with the Government, Contract No. DA-16-047-eng-2033, effective 1 December 1958, which contract provides for the reservation of a quantity of storage space to meet a water supply demand of 13 million gallons per day of water to be supplied to the Cities, and which contract is in no way to be altered by this contract; and

WHEREAS, the City entered into a contract with the Government, Contract No. DACW29-68-A-0103, effective on the date upon which Cooper Reservoir becomes operative for storage of water for the purpose of flood control or the date of completion of all modifications to Texarkana Reservoir which are required to effect the conversion of storage space therein from flood control use to municipal and industrial water supply use, whichever date is the later; which contract provides municipal and industrial water supply storage space for the use of the City, and which contract is in no way to be altered by this contract; and

WHEREAS, under the provisions of Section 6 of the Flood Control Act of 1944 (Public Law 534, 78th Congress, 2d Session), the Government is authorized to make contracts with States and local interests for water supply storage space for municipal and industrial purposes; and,

WHEREAS, the City desires to utilize, as outlined in Article 2 of this contract, storage space in Texarkana Reservoir for municipal and industrial water supply, on an interim basis, pending the availability of water under Contract No. DACW29-68-A-0103; and,

WHEREAS, it has been determined by the Government that Texarkana Reservoir can be operated in such a manner so as to make available a dependable supply of water estimated to be in the amount of 84 million gallons per day (m.g.d.) without materially affecting its usefulness for other lawful purposes; and

WHEREAS, the City has firm plans to utilize an additional water supply in the amount of 84 m.g.d.

NOW, THEREFORE, the parties do mutually agree as follows:

ARTICLE 1. DEFINITIONS. The following definitions are used in this contract:

a. The "effective date for water withdrawal" shall be the date that the City begins to withdraw water from Texarkana Reservoir under the terms of Article 2 of this contract, provided that such date is subsequent to approval of this contract by the Secretary of the Army.

b. The "total operating rule curve storage space" is that storage space developed in Texarkana Reservoir between the elevation of the operating rule curve in exhibit "A" to this contract and elevation 220 feet above mean sea level. This storage space is represented by the ordinates of the rule curve which vary from a minimum of 12,700 acre-feet in the months of November, December, January, February, and March to a maximum of 201,900 acre-feet on the first day of June, and will normally[1] provide for the following:

(1) Withdrawal from the Texarkana Reservoir, by the Cities under Contract No. DA-16-047-eng-2033, of the quantities of water shown in the following tabulation:

[1]Under certain exceptional conditions, provision of the quantities of water described in subparagraphs b(1), b(2), and b(3) of this Article may require that storage space in Texarkana Reservoir below the normal minimum pool elevation of 220 feet above mean sea level be utilized.

Period of year	Maximum allowable average daily rate in million gallons*
1 Jan to last day in Feb (incl)	9.8
1 Mar to 16 Jun (incl)	13.0
17 Jun to 31 Jul (incl)	15.6
1 Aug to 31 Aug (incl)	17.9
1 Sep to 16 Sep (incl)	15.6
17 Sep to 31 Oct (incl)	13.0
1 Nov to 31 Dec (incl)	11.4

*Withdrawals are not cumulative; i.e., the failure of the Cities to withdraw the maximum allowable quantity for any given period shall not increase the allowable quantity for any succeeding period. The average daily rate of withdrawal is, on an annual basis, 13 m.g.d.

(2) Withdrawal of water, by the Government, at a rate of 6.5 m.g.d. for the maintenance of minimum flow in the Sulphur River below Texarkana Dam.

(3) Withdrawal from the Texarkana Reservoir by the City under the terms of this contract of water at the rate of 84 m.g.d.

ARTICLE 2. WATER STORAGE SPACE.

a. The City shall have the right to utilize, from the effective date for water withdrawal, the total operating rule curve storage space as deemed necessary by the City to impound water in the Texarkana Reservoir for its municipal and industrial water supply use, and make such diversions as granted to the City by the Texas Water Rights Commission, or its successors, to the extent such storage will provide.

b. The right of the City to utilize storage space as outlined in subparagraph a. of this article shall be subject to the following:

(1) The prior right of the Cities to utilize, from the effective date of water withdrawal, the total operating rule curve storage space, to impound water in Texarkana Reservoir for their municipal and industrial water supply use, and to make such diversions as granted to the Cities by the Texas Water Rights Commission, or its successors, to the extent that such storage will provide, but not to exceed the quantities shown in subparagraph b(1) of Article 1 above.

(2) The right of the Government to utilize, from the effective date of water withdrawal, the total operating rule curve storage space, to impound water for the maintenance of minimum flow in the Sulphur River below Texarkana Dam to the extent that such storage will provide, but not exceed the quantity shown in subparagraph b(2) of Article 1 above.

c. The Government shall not be responsible for diversion by others, nor will it become a party to any controversies between users of the aforesaid storage space, except as such controversies may affect the use of storage space reserved by the Government.

d. The design and location of any future City installations or facilities that the City may construct at the Texarkana Reservoir for the purpose of diversions or withdrawals shall be subject to the approval of the Contracting Officer, and the cost of such installations or facilities, and any modifications thereof, shall be borne by the City.

e. The Government reserves the right to take such measures as may be necessary in the operation of the Texarkana Reservoir to preserve life and/or property.

f. To implement the provisions of this Article, the Government shall, at the appropriate time and in consultation with the City and the Cities, formulate a plan of operation for the project which will achieve these objectives. This plan shall include, but not be limited to, appropriate contingency provisions for the use of space below the normal minimum pool elevation of 220 feet above mean sea level, when necessitated by unusually low runoff over a protracted period.

ARTICLE 3. METERING. For the purpose of maintaining an accurate record of water resources at the Texarkana Reservoir, the City shall install suitable meters or metering devices satisfactory to the Contracting Officer, without cost to the Government, at such time as the City may withdraw water from the Texarkana Reservoir. The City shall furnish the Government periodically, at least monthly, a record of all such withdrawals from the Texarkana Reservoir. Nothing in this Article is to be construed as prohibiting participation by the City in cooperative gaging programs sponsored by the United States Geological Survey or other Government agencies in the water resources field.

ARTICLE 4. FEDERAL AND STATE LAWS. The City shall utilize such storage space in a manner consistent with Federal and state laws.

ARTICLE 5. REGULATION OF THE USE OF WATER. The regulation of the use of water stored in the storage space in Texarkana Reservoir between the elevations of the operating rule curve in exhibit "A" to this contract and elevation 220 feet above mean sea level shall be the joint responsibility of the City, the Cities, and the Government upon implementation of the plan of operation referred to in Article 2.f. above.

ARTICLE 6. CONSIDERATION AND PAYMENT. The City shall pay to the Government annually in advance on 1 January the sum of $55,300 in consideration for reserving storage capacity and the right to withdraw water in accordance with the provisions of Article 2 of this contract. Payment in the initial year will be prorated for the unexpired portion of that year from the date of initial payment. The date of initial payment shall be the effective date for water withdrawal.

ARTICLE 7. NO WARRANTIES AS TO QUALITY OF WATER. The parties hereto recognize that the water in the storage space being made available to the City under the terms of this agreement is raw reservoir water. The Government makes no representations with respect to the conditions or the potability of the water, and assumes no responsibility therefor or for treatment of the water, or for undertaking any action which might tend to reduce contamination from the reservoir or from other sources in the watershed.

ARTICLE 8. PERIOD OF CONTRACT. This contract shall become effective as of the date of approval by the Secretary of the Army, and shall continue in full force and effect until the date Contract No. DACW29-68-A-0103 with the City becomes effective. The effective date of Contract No. DACW29-68-A-0103 is the date upon which Cooper Reservoir becomes operative for storage of water for the purpose of flood control, or the date of completion of all modifications to Texarkana Reservoir which are required to effect the conversion of storage space therein from flood control use to municipal and industrial water supply use, whichever date is later. This contract shall be terminated when Contract No. DACW29-68-A-0103 becomes effective.

ARTICLE 9. OPERATION AND MAINTENANCE. The Government shall operate and maintain Texarkana Reservoir owned by the Government. The City shall have the right to make withdrawals of water for its purpose as needed in accordance with Article 2. The City shall be responsible for operation and maintenance of all features and appurtenances which may be provided and owned by the City.

ARTICLE 10. RIGHTS-OF-WAY. The Government, subject to the approval of the Secretary of the Army, shall, without additional consideration, grant to the City, by separate instrument or instruments, an easement or easements as may be required for the construction, operation, and maintenance of pumping facilities and water supply pipelines in, on, over, and across Government-owned lands acquired for project purposes. The instruments granting such easements shall be consistent with Government contract provisions in effect at that time, with such modifications as may be necessary in each instance and as may be approved by the Government.

ARTICLE 11. RELEASE OF CLAIMS. The City shall hold and save the Government, including its officers, agencies, and employees, harmless from liability of any nature or kind for or on account of

any claim for damages which may be filed or asserted as a result of the storage in Texarkana Reservoir or withdrawal or release of water from Texarkana Reservoir, made or ordered by the City, or as a result of the construction, operation, or maintenance of the features or appurtenances owned and operated by the City.

ARTICLE 12. TRANSFER OR ASSIGNMENT. The City shall not transfer or assign this contract, nor any rights acquired thereunder, nor suballot said water or storage space or any part thereof, nor grant any interest, privilege, or license whatsoever in connection with this contract, without approval of the Secretary of the Army; provided that, unless contrary to the public interest, this restriction shall not be construed to apply to any water which may be obtained from the municipal and industrial water supply storage space by the City and furnished to any third party or parties.

ARTICLE 13. OFFICIALS NOT TO BENEFIT. No member of or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this contract, or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE 14. COVENANT AGAINST CONTINGENT FEES. The City warrants that no person or selling agency has been employed or retained to solicit or secure this contract upon an agreement or in understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the City for the purpose of securing business. For breach or violation of this warranty, the Government shall have the right to annul this contract without liability or in its discretion to add to the contract price or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee.

ARTICLE 15. APPROVAL OF CONTRACT. This contract shall be subject to the written approval of the Secretary of the Army, and shall not be binding until so approved.

IN WITNESS WHEREOF, the parties hereto have executed this agreement as of the day and year first above written.

APPROVED:

Stanley R. Resor
Secretary of the Army

Date: 17 DEC 1969

THE UNITED STATES OF AMERICA

By Herbert M. Haar
(Contracting Officer)
HERBERT R. HAAR, JR.
Colonel, CE
District Engineer

CITY OF TEXARKANA, TEXAS

By
City Manager

P.O. Box 1967
Texarkana, Texas
(Post office address)

ATTEST:

Secretary, City of Texarkana, Texas

APPROVED AS TO FORM:

Attorney, City of Texarkana, Texas

DACW29-69-C-0019

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I, Helen R Tolbert, certify that I am the Secretary of the City of Texarkana, Texas, named as City herein; that Bill Mabry who signed this contract on behalf of the City was then CITY MANAGER of the CITY OF TEXARKANA, TEXAS: that said contract was duly signed for and on behalf of the CITY OF TEXARKANA, TEXAS, by authority of its governing body and is within the scope of its legal powers.

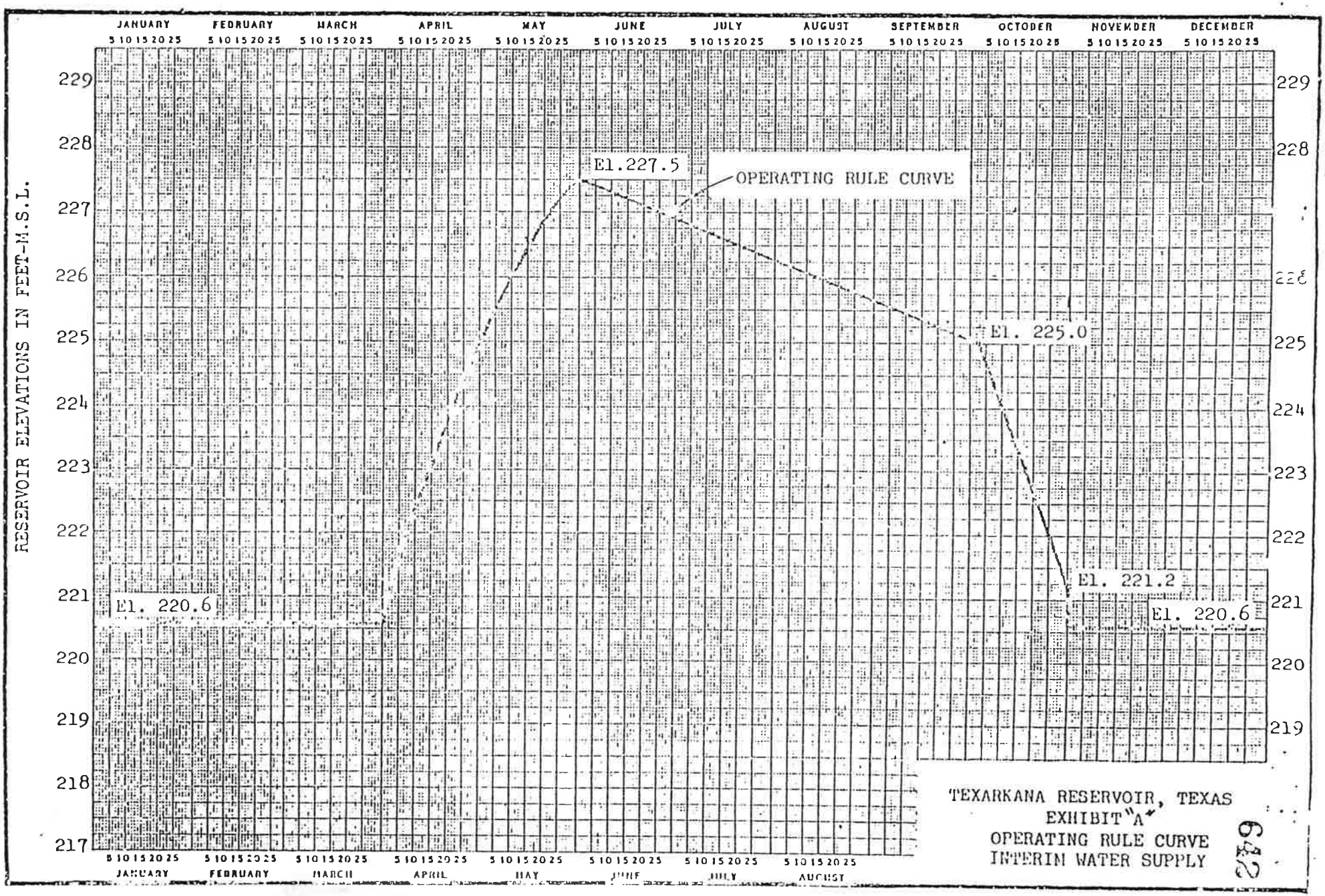
In Witness Whereof, I have hereunto affixed my hand and the seal of the CITY OF TEXARKANA, TEXAS, this 16 day of Oct 196[illegible].

Helen R Tolbert
Secretary, City of Texarkana, Texas

CORPORATE SEAL

EXHIBIT "A"

OPERATING RULE CURVE
TEXARKANA RESERVOIR
INTERIM WATER SUPPLY


JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
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217
RESERVOIR ELEVATIONS IN FEET-M.S.L.
El.227.5
OPERATING RULE CURVE
El. 225.0
El. 221.2
El. 220.6
El. 220.6
TEXARKANA RESERVOIR, TEXAS
EXHIBIT "A"
OPERATING RULE CURVE
INTERIM WATER SUPPLY

EXHIBIT "B"

COMPUTATION OF ANNUAL
PAYMENT FOR INTERIM
WATER SUPPLY

Computation of Annual Payment for the Provision of the Interim Water Supply Storage Space

Total project cost		$36,002,000
Less specific cost for recreation facilities		2,232,000
Joint-use construction cost		$33,770,000
Interest during construction (2.556%)		3,313,000
Total investment in joint-use construction		$37,083,000
Annual charge for amortization of investment in joint-use construction (2.5%- 50-year life). $37,083,000 x 0.01026 = $380,472. Allowance for portion of project life already expended (cumulative amortization for 11 years compounded at 2.5% interest). $380,472 x 12.483 =		-$ 4,749,432
Adjusted investment		$32,333,568
Escalation of adjusted investment: $32,333,568 x 1.5[1/]		$48,500,352
Total storage space in Texarkana Reservoir to top of flood control pool	2,654,300 a.f.	
Sediment reserve	-68,000 a.f.	
Storage space in Texarkana Reservoir available for use by the recognized project purposes	2,586,300 a.f.	
Total operating rule curve storage space (average)	109,626 a.f.	
Portion of total operating rule curve storage space (average) required to meet the needs of the Cities and the Government	-32,963 a.f.	
Effective storage (average) available to the City	76,663 a.f.	
Total cost to be allocated		$48,500,352
Cost allocated to the City $48,500,352 x 76,663/2,586,300 =		$ 1,437,647

[1/] Ratio of Engineering News Record Heavy Construction Index for July 1968 and Dec 1958 as follows: 1158/774 = 1.50

Annual Charges

Allocated cost as computed below	$ 49,980
Allocated operation and maintenance cost $165,000 x 76,663/2,586,300 =	4,891
Allocated joint-use major capital replacements and sedimentation resurvey costs $14,000 x 76,663/2,586,300 =	415
Total Annual Payment	$ 55,286
(Rounded)	$ 55,300

Computation of value of annual payment for repayment of allocated first cost (based on 50 payments, 49 of which bear interest on the unpaid balance)

$$D = \frac{i\,(1+i)^{n-1}}{(1+i)^{n}-1} \times R$$

WHEREIN
D = annual payment
R = amount to be repaid = $1,437,647.
i = interest rate = 2.556%
n = No. of payments = 50

$$D = \frac{.02556\,(1+.02556)^{49}}{(1+.02556)^{50}-1} \times \$1,437,647$$

$$D = .034765 \times \$1,437,647$$

$$D = \$49,980$$

6857 CONTRACT NO. DACW29-68-A-0103

CONTRACT BETWEEN THE UNITED STATES OF AMERICA
AND
THE CITY OF TEXARKANA, TEXAS,
FOR
MUNICIPAL AND INDUSTRIAL
WATER SUPPLY STORAGE SPACE IN TEXARKANA RESERVOIR

THIS CONTRACT, entered into this 16th day of April 19 68 by and between the UNITED STATES OF AMERICA (hereinafter called the "Government"), represented by the Contracting Officer executing this contract, and the City of Texarkana, Texas, a municipal corporation existing under the laws of Texas, with its principal office in the city of Texarkana, Bowie County, Texas (hereinafter called the "City"), WITNESSETH THAT:

WHEREAS, the Government, pursuant to the Flood Control Act of 24 July 1946 (Public Law 526, 79th Congress, 2d Session), has constructed and operates and maintains the Texarkana Reservoir on the Sulphur River in Cass and Bowie Counties, Texas; and,

WHEREAS, the authorization for the Texarkana Reservoir provides for flood control through flood control storage space in the reservoir; and,

WHEREAS, construction of Cooper Reservoir on the South Sulphur River, Texas, has been authorized by the Act approved 3 September 1954 (Public Law 780, 83d Congress, 2d Session), as amended by the Act approved 3 August 1955 (Public Law 218, 84th Congress, 1st Session); and,

WHEREAS, the authorization for the Cooper Reservoir provides inter alia, for conversion, upon completion of the Cooper Reservoir of 120,000 acre-feet of flood control storage space in Texarkana Reservoir to conservation uses; and,

WHEREAS, the City, by "AN ORDER" of the Texas Water Rights Commission, dated 6 September 1966, has been designated as cooperating local sponsor, and the Texas Water Development Board, by the same order, has been designated conegotiator, for the purpose of negotiating a contract with the Government for municipal and industrial water supply storage space in Texarkana Reservoir; and,

WHEREAS, the Government is authorized by the Water Supply Act of 1958 (Title III of Public Law 85-500 approved 3 July 1958), as amended by Section 10 of the Federal Water Pollution Control Act Amendments of 1961 (Public Law 87-88 approved 20 July 1961) to include storage in any reservoir project that has been or is to be constructed by the Corps of Engineers to impound water for initial or anticipated future demand or need for municipal or industrial water; and,

Incl 1

WHEREAS, storage space in the amount of 120,000 acre-feet will be available for municipal and industrial water supply in the Texarkana Reservoir upon completion of the Cooper Reservoir; and,

WHEREAS, Public Law 88-140, approved 16 October 1963, makes permanent the rights of states and local interests to utilize municipal and industrial storage in Corps of Engineers' reservoirs for which they have contributed; and,

WHEREAS, the City desires to utilize storage space in Texarkana Reservoir for municipal and industrial water supply as set forth in Article 2; and,

WHEREAS, the City hereby agrees to fulfill the local interest requirements of the Water Supply Act of 1958, as amended; and,

WHEREAS, the cities of Texarkana, Texas and Arkansas (hereinafter called the "Cities"), entered into a contract with the Government, Contract No. DA-16-047-eng-2033, effective 1 December 1958, which contract provides a certain quantity of water to be supplied to the Cities, and which contract is in no way to be altered by this contract.

NOW, THEREFORE, the parties do mutually agree as follows:

ARTICLE 1. DEFINITIONS. The following definitions are used in this contract:

a. The "date of deliberate impoundment" shall be the date upon which Cooper Reservoir becomes operative for storage of water for the purpose of flood control.

b. The "effective date for water withdrawal" shall be the date the City shall have the right to begin withdrawal of water from Texarkana Reservoir pursuant to Article 2 of this contract, such date being determined as the later of: (1) the date of deliberate impoundment as defined above, or (2) the date of completion of all modifications to Texarkana Reservoir which are required to effect the conversion of storage space therein from flood control use to municipal and industrial water supply use.

c. The "total operating rule curve storage space" is that storage space developed in Texarkana Reservoir between the elevation of the operating rule curve in exhibit "A" to this contract and elevation 220.0 feet above mean sea level. This storage space is represented by the ordinates of the rule curve which vary from a minimum of 120,000 acre-feet in the months of January, February, and March, to a maximum of 241,600 acre-feet in the month of June, and will provide for the following:

(1) Withdrawal from the Texarkana Reservoir, by the Cities under Contract No. DA-16-047-eng-2033, of the quantities of water shown in the following tabulation:

Period of year	Maximum allowable average daily rate in million gallons*
1 Jan to last day in Feb (incl)	9.8
1 Mar to 16 Jun (incl)	13.0
17 Jun to 31 Jul (incl)	15.6
1 Aug to 31 Aug (incl)	17.9
1 Sep to 16 Sep (incl)	15.6
17 Sep to 31 Oct (incl)	13.0
1 Nov to 31 Dec (incl)	11.4

*Withdrawals are not cumulative; i.e., the failure of the Cities to withdraw the maximum allowable quantity for any given period shall not increase the allowable quantity for any succeeding period. The average daily rate of withdrawal is, on an annual basis, 13 m.g.d.

(2) Withdrawal of water, by the Government, at a rate of 6.5 m.g.d. for the maintenance of minimum flow in the Sulphur River below Texarkana Dam.

(3) Storage space for municipal and industrial water supply use by the City.

ARTICLE 2. WATER STORAGE SPACE.

a. The City shall have the right to utilize, from the effective date for water withdrawal, the total operating rule curve storage space as deemed necessary by the City to impound water in the Texarkana Reservoir for its municipal and industrial water supply use, and make such diversions as granted to the City by the Texas Water Rights Commission, or its successors, to the extent such storage will provide.

b. The right of the City to utilize storage space as outlined in subparagraph a. of this article shall be subject to the following:

(1) The prior right of the Cities to utilize, from the effective date of water withdrawal, the total operating rule curve storage space, to impound water in Texarkana Reservoir for their municipal and industrial water supply use, and to make such diversions as granted to the Cities by the Texas Water Rights Commission, or its successors, to the extent that such storage will provide, but not to exceed the quantities shown in subparagraph c.(1) of ARTICLE 1 above.

(2) The right of the Government to utilize, from the effective date of water withdrawal, the total operating rule curve storage space, to impound water for the maintenance of minimum flow in the Sulphur River below Texarkana Dam to the extent that such storage will provide, but not to exceed the quantity shown in subparagraph c.(2) of Article 1 above.

c. The City shall not make or permit withdrawals which would lower the water level below elevation 220 feet above mean sea level, unless expressly approved in writing by the Contracting Officer.

d. The Government shall not be responsible for diversion by others, nor will it become a party to any controversies between users of the aforesaid storage space, except as such controversies may affect the use of storage space reserved by the Government.

e. The design and location of any future City installations or facilities that the City may construct at the Texarkana Reservoir for the purpose of diversions or withdrawals shall be subject to the approval of the Contracting Officer, and the cost of such installations or facilities, and any modifications thereof, shall be borne by the City.

f. The Government reserves the right to take such measures as may be necessary in the operation of the Texarkana Reservoir to preserve life and/or property.

g. To implement the provisions of this Article, the Government shall, at the appropriate time and in consultation with the City and the Cities, formulate a plan of operation for the project which will achieve these objectives.

ARTICLE 3. METERING. For the purpose of maintaining an accurate record of water resources at the Texarkana Reservoir, the City shall install suitable meters or metering devices satisfactory to the Contracting Officer, without cost to the Government, at such time as the City may withdraw water from the Texarkana Reservoir. The City shall furnish the Government periodically, at least monthly, a record of all such withdrawals from the Texarkana Reservoir. Nothing in this Article is to be construed as prohibiting participation by the City in cooperative gaging programs sponsored by the United States Geological Survey or other Government agencies in the water resources field.

ARTICLE 4. FEDERAL AND STATE LAWS. The City shall utilize such storage space in a manner consistent with Federal and state laws.

ARTICLE 5. REGULATION OF THE USE OF WATER. The regulation of the use of water stored in the storage space in Texarkana Reservoir between the elevations of the operating rule curve in exhibit "A" to this contract and elevation 220 feet above mean sea level shall be the joint responsibility of the City, the Cities, and the Government upon implementation of the plan of operation referred to in Article 2.g. above.

ARTICLE 6. CONSIDERATION AND PAYMENT.

a. In consideration of the Government's providing the aforesaid storage space for municipal and industrial water supply use by the City, it is agreed that the City shall pay the following sums to the Government:

(1) Six million one hundred and ninety-eight thousand nine hundred and sixty-nine dollars ($6,198,969), which is the estimated cost, including interest during construction, of providing the storage space for municipal and industrial water supply use, in annual payments in the amount of two hundred and forty-four thousand six hundred and sixty-six dollars ($244,666). Except for the first payment, which shall be applied solely to the reduction of the principal, all payments shall include accrued interest at the rate of three and two hundred fifty-three thousandths percent (3.253%) per annum on the unpaid balance. The aforesaid payments are more specifically set forth in exhibit "B" attached hereto and made a part hereof, and the last payment shall be adjusted upward or downward, when due, to assure the repayment of all capital costs by the end of 50 years. The first payment shall be due and payable within thirty (30) days following the date the City is notified of the effective date for water withdrawal. Payments thereafter shall be due and payable within thirty (30) days of the yearly anniversary date of the first payment under this contract.

(2) Five and three hundred eighty-seven thousandths percent (5.387%) of the annual experienced joint-use cost of ordinary operation and maintenance of Texarkana Reservoir. The first payment, estimated to be eight thousand eight hundred and eighty-eight dollars ($8,888), will be due and payable within thirty (30) days following the date the City is notified of the effective date for water withdrawal. Annual payments thereafter will be due and payable in advance on the anniversary date of the effective date for water withdrawal, and will be equal to five and three hundred eighty-seven thousandths percent (5.387%) of the actual experienced joint-use cost of ordinary operation and maintenance for the preceding Government fiscal year. The second payment shall be increased or decreased in an amount to reflect the difference between the first payment and five and three hundred eighty-seven thousandths percent (5.387%) of the actual experienced joint-use cost of ordinary

operation and maintenance for the preceding fiscal year. Records of cost of operation and maintenance of Texarkana Reservoir will be available for inspection and examination by the City. The extent of operation and maintenance of Texarkana Reservoir shall be determined by the Contracting Officer and all records and accounting shall be maintained by the Contracting Officer. In the event the City should require additional operation and maintenance of the municipal and industrial water supply storage facilities over and above that deemed necessary by the Contracting Officer, the City shall bear the entire cost of such additional expense.

(3) Fifty percent (50.0%) of the cost of operation cost and maintenance of Government-owned recreation facilities located below elevation 235.0 feet mean sea level when incurred.

(4) Five and three hundred eighty-seven thousandths percent (5.387%) of the cost of sedimentation resurveys and joint-use major capital replacements when incurred.

(5) In the event of default in the payment of the costs contained in Article 6.a.(1), (2), (3), and (4), the amount of such payments shall be increased by an amount equal to interest on such overdue payments at the rate of three and two hundred fifty-three thousandths percent (3.253%) per annum thereon, compounded annually, and such amount equal to interest shall be charged from the date such payments are due until paid.

b. In the event the actual first cost of the municipal and industrial water supply space exceeds the presently estimated first cost, as set forth in exhibit "C," the aforesaid annual payments shall be increased to reflect the actual first cost, as determined by the Contracting Officer. In the event such first cost of the municipal and industrial water supply space is less than the presently estimated first cost, the aforesaid annual payments shall be decreased to reflect the actual first cost, as determined by the Contracting Officer. In the event the annual payments are increased or decreased, as provided above, an adjustment, as determined by the Contracting Officer, of payments made prior to the determination of the final cost of providing the municipal and industrial water supply space shall be made in the first payment due after such costs are determined. The interest rate used in this contract, two and five hundred fifty-six thousandths percent (2.556%),to compute interest during construction on the initial cost of construction of Texarkana Reservoir is the rate, determined by the Secretary of the Treasury, as of the beginning of the fiscal year (1949) in which construction of Texarkana Reservoir was initiated, on the basis of the computed average interest rate payable by the Treasury upon its outstanding marketable public obligations, which are neither due nor callable for redemption for 15 years from date of issue. The interest rate used in this contract

(3.253%) for the purposes of computing interest during construction on the costs of modifications required to effect the conversion of flood control storage space to municipal and industrial water supply storage space, and interest on the unpaid balance, is for estimating purposes only. The actual interest rate used for these purposes shall be that determined by the Secretary of the Treasury, as of the beginning of the fiscal year in which conversion of flood control storage space to municipal and industrial water supply storage space is initiated, on the basis of the computed average interest rate payable by the Treasury upon its outstanding marketable public obligations, which are neither due nor callable for redemption for 15 years from date of issue. At the time that the final costs of providing the municipal and industrial water supply space are determined, the repayment schedules shall be modified to reflect the increased or decreased annual payments and such modification will form a part of this contract.

ARTICLE 7. NO WARRANTIES AS TO QUALITY OF WATER. The parties hereto recognize that the water in the storage space being made available to the City under the terms of this agreement is raw reservoir water. The Government makes no representations with respect to the conditions or the potability of the water, and assumes no responsibility therefor or for treatment of the water, or for undertaking any action which might tend to reduce contamination from the reservoir or from other sources in the watershed.

ARTICLE 8. PERIOD OF CONTRACT. This contract shall become effective as of the date of approval by the Secretary of the Army, and shall continue in full force and effect, under the conditions set forth herein not to exceed the life of Texarkana Reservoir. This contract is subject to the provisions of Public Law 88-140, approved 16 October 1963, and the City shall have a permanent right to the use of such storage spaces after the period of years specified for repayment under Article 6 of the contract subject to the following:

a. The City must have discharged its responsibilities for payment of the costs allocated to municipal and industrial water supply.

b. The City must continue payment of its share of annual operation and maintenance costs allocated to municipal and industrial water supply.

c. The City must pay in lump sum, or annually with interest, the costs allocated to municipal and industrial water supply which may at termination of the repayment period set forth in the contract, or thereafter, be required for any necessary reconstruction, rehabilitation, or replacement of features which may be required to

continue satisfactory operation of Texarkana Reservoir. Such costs will be established by the Contracting Officer. Repayment arrangements will be in writing and will be made a part of this contract.

d. Upon termination of the repayment periods set forth in the contract, the Contracting Officer shall redetermine the storage space for municipal and industrial water supply, taking into account such equitable reallocation of reservoir storage capacities among the purposes served by Texarkana Reservoir, as may be necessary due to sedimentation. Such findings, and the storage space allocated to municipal and industrial water supply, shall be defined and described in an exhibit which will be made a part of this contract. Following the same principle, such reallocation of reservoir storage capacity may be further adjusted from time to time as the result of sedimentation resurveys to reflect actual rates of sedimentation and the exhibit revised to show the revised storage space allocated to municipal and industrial water supply.

e. The permanent rights of the City under this contract shall be continued as long as the Government continues to operate Texarkana Reservoir. In the event the Government no longer operates Texarkana Reservoir, such rights may be continued subject to the execution of a separate contract, or supplemental agreement providing for:

(1) Continued operation by the City of such part of the facility as is necessary for utilization of the storage space allocated to it;

(2) Terms which will protect the public interest; and

(3) Effective absolvement of the Government by the City from all liability in connection with such continued operation.

ARTICLE 9. OPERATION AND MAINTENANCE. The Government shall operate and maintain Texarkana Reservoir owned by the Government. The City shall have the right to make withdrawals of water for its purpose as needed in accordance with Article 2. The City shall be responsible for operation and maintenance of all features and appurtenances which may be provided and owned by the City.

ARTICLE 10. RIGHTS-OF-WAY. The Government, subject to the approval of the Secretary of the Army, shall, without additional consideration, grant to the City, by separate instrument or instruments, an easement or easements as may be required for the construction, operation, and maintenance of pumping facilities and water supply pipelines in, on, over, and across Government-owned lands acquired for project purposes. The instruments granting such easements shall be consistent with

Government contract provisions in effect at that time, with such modifications as may be necessary in each instance and as may be approved by the Government.

ARTICLE 11. RELEASE OF CLAIMS. The City shall hold and save the Government, including its officers, agencies, and employees, harmless from liability of any nature or kind for or on account of any claim for damages which may be filed or asserted as a result of the storage in Texarkana Reservoir or withdrawal or release of water from Texarkana Reservoir, made or ordered by the City, or as a result of the construction, operation, or maintenance of the features or appurtenances owned and operated by the City.

ARTICLE 12. TRANSFER OR ASSIGNMENT. The City shall not transfer or assign this contract, nor any rights acquired thereunder, nor suballot said water or storage space or any part thereof, nor grant any interest, privilege, or license whatsoever in connection with this contract, without approval of the Secretary of the Army; provided, that, unless contrary to the public interest, this restriction shall not be construed to apply to any water which may be obtained from the municipal and industrial water supply storage space by the City and furnished to any third party or parties.

ARTICLE 13. OFFICIALS NOT TO BENEFIT. No member of or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this contract, or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE 14. COVENANT AGAINST CONTINGENT FEES. The City warrants that no person or selling agency has been employed or retained to solicit or secure this contract upon an agreement or in understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the City for the purpose of securing business. For breach or violation of this warranty, the Government shall have the right to annul this contract without liability or in its discretion to add to the contract price or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee.

ARTICLE 15. APPROVAL OF CONTRACT. This contract shall be subject to the written approval of the Secretary of the Army, and shall not be binding until so approved.

CONTRACT NO. DACW29-68-A-0103

IN WITNESS WHEREOF, the parties hereto have executed this agreement as of the day and year first above written.

APPROVED:

Stanley R. Resor
Secretary of the Army

Date: 11 JUL 1968

THE UNITED STATES OF AMERICA

By _____
(Contracting Officer)

CITY OF TEXARKANA, TEXAS

By _____
City Manager

_____
(Post office address)

ATTEST:

_____
Secretary, City of Texarkana, Texas

APPROVED AS TO FORM:

_____
Attorney, City of Texarkana, Texas

CONTRACT NO. DACW29-68-A-0103

I, Helen B. Talbert, certify that I am the Secretary of the City of Texarkana, Texas, named as City herein; that Howard W. Willingham who signed this contract on behalf of the City was then CITY MANAGER of the CITY OF TEXARKANA, TEXAS; that said contract was duly signed for and on behalf of the CITY OF TEXARKANA, TEXAS by authority of its governing body and is within the scope of its legal powers.

In Witness Whereof, I have hereunto affixed my hand and the seal of the CITY OF TEXARKANA, TEXAS, this 16th day of April 1968.

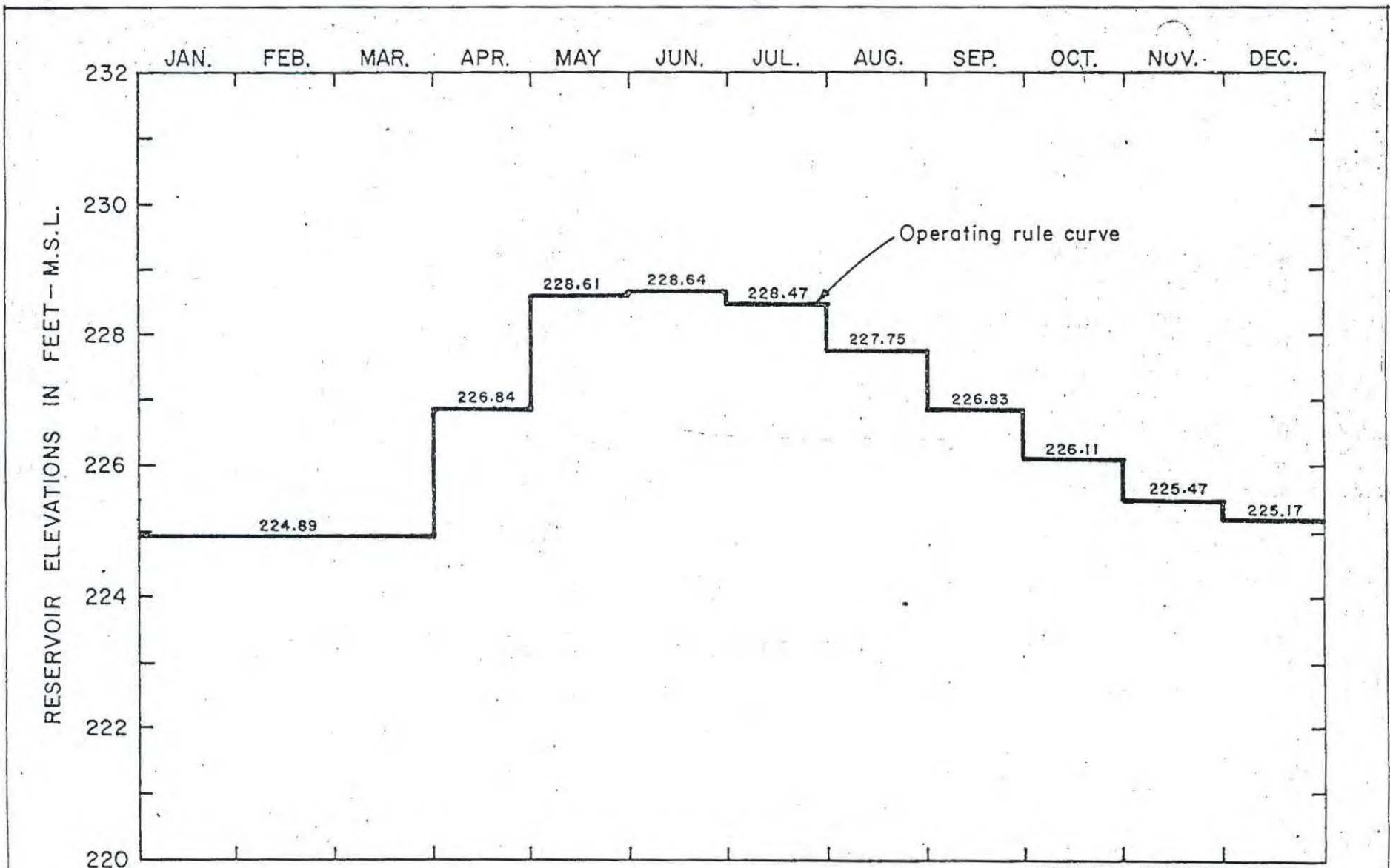
Helen B Talbert
Secretary, City of Texarkana, Texas

CORPORATE SEAL

EXHIBIT "A"

OPERATING RULE CURVE

TEXARKANA RESERVOIR



TEXARKANA RESERVOIR, TEXAS

EXHIBIT "A"

OPERATING RULE CURVE

EXHIBIT "B"

REPAYMENT TABLE FOR
MUNICIPAL AND INDUSTRIAL STORAGE SPACE

TOTAL COST $ 6198969.00
NUMBER OF PAYMENTS 50
INTEREST RATE, PERCENT 0.03253

ANNUAL PAYMENT NUMBER	AMOUNT OF PAYMENT	APPLICATION		BALANCE ALLOC COST
		INTEREST	ALLOC COST	
1	244666.00	0.00	244666.00	5954303.01
2	244666.00	193693.47	50972.53	5903330.46
3	244666.00	192035.34	52630.66	5850699.81
4	244666.00	190323.26	54342.74	5796357.07
5	244666.00	188555.49	56110.51	5740246.57
6	244666.00	186730.22	57935.78	5682310.78
7	244666.00	184845.56	59820.44	5622490.35
8	244666.00	182899.61	61766.39	5560723.95
9	244666.00	180890.35	63775.65	5496948.31
10	244666.00	178815.72	65850.28	5431098.03
11	244666.00	176673.61	67992.39	5363105.63
12	244666.00	174461.82	70204.18	5292901.45
13	244666.00	172178.08	72487.92	5220413.52
14	244666.00	169820.05	74845.95	5145567.58
15	244666.00	167385.31	77280.69	5068286.89
16	244666.00	164871.37	79794.63	4988492.26
17	244666.00	162275.65	82390.35	4906101.91
18	244666.00	159595.49	85070.51	4821031.40
19	244666.00	156828.15	87837.85	4733193.54
20	244666.00	153970.78	90695.22	4642498.33
21	244666.00	151020.47	93645.53	4548852.79
22	244666.00	147974.18	96691.82	4452160.98
23	244666.00	144828.79	99837.21	4352323.77
24	244666.00	141581.09	103084.91	4249238.87
25	244666.00	138227.74	106438.26	4142800.61
26	244666.00	134765.30	109900.70	4032899.90
27	244666.00	131190.23	113475.77	3919424.13
28	244666.00	127498.86	117167.14	3802256.99
29	244666.00	123687.42	120978.58	3681278.41
30	244666.00	119751.98	124914.02	3556364.39
31	244666.00	115688.53	128977.47	3427386.92
32	244666.00	111492.89	133173.11	3294213.81
33	244666.00	107160.77	137505.23	3156708.58
34	244666.00	102687.73	141978.27	3014730.31
35	244666.00	98069.17	146596.83	2868133.49
36	244666.00	93300.38	151365.62	2716767.86
37	244666.00	88376.45	156289.55	2560478.31
38	244666.00	83292.35	161373.65	2399104.66
39	244666.00	78042.87	166623.13	2232481.53
40	244666.00	72622.62	172043.38	2060438.16
41	244666.00	67026.05	177639.95	1882798.21
42	244666.00	61247.42	183418.58	1699379.63
43	244666.00	55280.81	189385.19	1509994.44
44	244666.00	49120.11	195545.89	1314448.55
45	244666.00	42759.01	201906.99	1112541.56
46	244666.00	36190.97	208475.03	904066.53
47	244666.00	29409.28	215256.72	688809.81
48	244666.00	22406.98	222259.02	466550.79
49	244666.00	15176.89	229489.11	237061.68
50	244773.29	7711.61	237061.68	0.00

EXHIBIT "C"

COMPUTATION OF ESTIMATED COSTS
FOR MUNICIPAL AND INDUSTRIAL
WATER SUPPLY STORAGE ALLOCATED TO THE CITY

I - Computation of Construction Cost Allocated to the City

Total project cost		$36,002,000
Less specific cost for recreation facilities		-$ 2,232,000
Joint-use construction cost		$33,770,000
Interest during construction (2.556%)		$ 3,313,000
Total cost to be allocated		$37,083,000
Total storage space in Texarkana Reservoir to top of flood control pool	2,654,300 a.f.	
Sediment reserve	-68,000 a.f.	
Storage space in Texarkana Reservoir available for use by the recognized project purposes	2,586,300 a.f.	
Total operating rule curve storage space (average)	172,283 a.f.	
Portion of total operating rule curve storage space (average) required to meet the needs of the Cities and the Government	-32,963 a.f.	
Effective storage (average) available to the City	139,320 a.f.	
Construction cost allocated to the City 139,320/2,586,300 x $37,083,000 = .05386846 x $37,083,000 =		$ 1,997,604

II - Computation of First Cost to be Repaid by the City for the Use of the Total Operating Rule Storage Space

Construction cost allocated to municipal and industrial water supply		$ 1,997,604
Total operating rule curve storage space (peak month)	241,600 a.f.	
Portion of total operating rule curve storage space (peak month) required to meet the needs of the Cities and the Government	-71,200 a.f.	
Effective storage space available to the City (peak month)	170,400 a.f.	
Estimate of real estate costs to be incurred as a result of the conversion of 170,400 a.f. of flood control storage to use for municipal and industrial water supply		$ 1,800,000
Estimate of relocation costs to be incurred as a result of the conversion of 170,400 a.f. of flood control storage to use for municipal and industrial water supply		$ 2,269,000

Interest during construction on conversion costs (3.253% x 1/2 of 2-yr. period)	$ 132,36[illegible]
Total first cost	$ 6,198,96[illegible]

III - Computation of Estimated Annual Charges to be Paid by the City for Use of the Total Operating Rule Curve Storage Space

Repayment of allocated first cost as computed below	$ 244,66[illegible]

Computation of value of annual payment for repayment of allocated first cost (based on 50 payments, 49 of which bear interest on the unpaid balance)

$$D = \frac{i\,(1+i)^{n-1}}{(1+i)^{n}-1} \times R$$

WHEREIN
D = annual payment
R = amount to be repaid = $6,198,969
i = interest rate = 3.253%
n = No. of payments = 50

$$D = \frac{.03523\,(1+.03523)^{49}}{(1+.03253)^{50}-1} \times \$6,198,969$$

$.0394689 x $6,198,969 =
D = $244,666

Allocated operation and maintenance and other incidental costs as computed below	$ 24,642

$165,000 = estimated joint-use operation and maintenance cost.
prorata share of joint-use operation and maintenance cost = 139,320/2,586,300 x $165,000 = .05386846 x $165,000 = $8,888

Estimated additional operation and maintenance cost for recreation facilities caused by the increased frequency of flooding = $15,000

Major capital replacement and sedimentation resurvey costs computed as follows:
$10,000 = estimated joint-use replacement cost
$4,000 = estimated cost of sedimentation resurveys
$10,000 + $4,000 = $14,000
Prorata share of joint-use major capital replacements and sedimentation resurvey costs $14,000 x 139,320/2,586,300 = $14,000 x .05386846 = $754

Total annual cost to be paid by the City for use of the total operating rule curve storage space	$ 269,308

ASSURANCE OF COMPLIANCE WITH THE DEPARTMENT OF DEFENSE DIRECTIVE UNDER TITLE VI OF THE CIVIL RIGHTS ACT OF 1964

CITY OF TEXARKANA, TEXAS (hereinafter called the "City") HEREBY AGREES THAT it will comply with title VI of the Civil Rights Act of 1964 (P.L. 88-352) and all requirements imposed by or pursuant to the Directive of the Department of Defense (32 CFR Part 300, issued as Department of Defense Directive 5500.11, December 28, 1964) issued pursuant to that title, to the end that, in accordance with title VI of that Act and the Directive, no person in the United States shall, on the ground of race, color, or national origin be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity in connection with the collection, distribution, and use of water, for municipal and industrial purposes, from storage space in the Texarkana Reservoir, which reservoir was constructed by the U. S. Army Corps of Engineers and in connection with which the City will receive financial assistance under the Water Supply Act of 1958, 43 United States Code 390b, and HEREBY GIVES ASSURANCE THAT it will immediately take any measures necessary to effectuate this agreement.

If any real property or structure thereon is provided or improved with the aid of Federal financial assistance extended to the City by the Department of the Army, assurance shall obligate the City, or in the case of any transfer of such property, any transferee, for the period during which the real property or structure is used for another purpose involving the provision of similar services or benefits. If any personal property is so provided, this assurance shall obligate the City for the period during which it retains ownership or possession of the property. In all other cases, this assurance shall obligate the City for the period during which the Federal financial assistance is extended to it by the Department of the Army.

THIS ASSURANCE is given in consideration of and for the purpose of obtaining any and all Federal grants, loans, contracts, property, discounts, or other Federal financial assistance extended after the date hereon to the City by the Department, including installment payments after such date on account of arrangements for Federal financial assistance which were approved before such date. The City recognizes and agrees that such Federal financial assistance will be extended in reliance on the representations and agreements made in this assurance, and that the United States shall have the right to seek judicial

enforcement of this assurance. This assurance is binding on the City, its successors, transferees, and assignees, and the person or persons whose signatures appear below are authorized to sign this assurance on behalf of the City.

Dated April 18, 1968

CITY OF TEXARKANA, TEXAS

P. O. Box 1967
(City's mailing address)

By _____
(President, Chairman of Board or comparable authorized official) Mayor

Cr/ 6857
D Contract
United States of America
to
The City of Texarkana, Texas
4-16-68

COMPARED

$21.50

FILED
'68 OCT -3 A 10:46
Geraldine Tidwell
BOWIE COUNTY CLERK
BOSTON, TEXAS

498
447-467

Bill

City of Texarkana
P.O. Box 1967
Texarkana, Texas 75501

THE STATE OF TEXAS }
County of Bowie }

GERALDINE TIDWELL Clerk of the County Court in and for said County, do hereby certify, that the foregoing instrument, dated the 16 day of April 1968 with its certificate of authentication, was filed for record in my office the 3 day of Oct. 1968 at 10:46 o'clock A M. and duly recorded the 4 day of Oct. 1968 at 10:00 o'clock A M. in Deed Record of said County, in Vol. 498 on Pages 447-467

Witness my hand and the seal of the County Court of said County, at office in Boston, Texas, the day and year last above written.

GERALDINE TIDWELL Clerk County Court, Bowie County, Texas

Lucille Murdock Deputy

APPENDIX G

Water Contracts (TWU)

SUSAN ROTH
water and wastewater consulting

WATER SUPPLY CONTRACT BETWEEN
THE CITY OF TEXARKANA, TEXAS, AND
INTERNATIONAL PAPER COMPANY

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This Agreement, made and entered into, this the 11 day of October, 1971, by and between the City of Texarkana, Texas, a municipality situated in Bowie County, Texas, (hereinafter called "City"), and International Paper Company, a corporation organized under the laws of the State of New York and having a permit to do business within the State of Texas (hereinafter called "Company"), providing as follows:

1) WHEREAS, under Contract Numbered DACW 29-68-A-0103 entered into between the United States of America and the City of Texarkana, Texas, for municipal and industrial water supply storage space in Texarkana Reservoir (hereinafter referred to as the "Permanent Government Supply Contract"), the City has acquired the right to utilize storage space in Texarkana Reservoir for municipal and industrial water supply purposes with the right to begin withdrawal of water from Texarkana Reservoir upon the "effective date for water withdrawal" as defined in said Contract; and,

2) WHEREAS, under a Contract Numbered DACW 29-69-C-0019 entered into the 16th day of September, 1968, by and between the United States of America and the City of Texarkana, Texas, (hereinafter referred to as the "Interim Government Supply Contract"), the City has acquired the right to utilize storage space in Texarkana Reservoir for municipal and industrial water supply purposes on an interim basis, pending the availability of storage space under Contract Numbered DACW 29-68-A-0103; and,

3) WHEREAS, the City of Texarkana, Texas, has been authorized to appropriate and use waters impounded in Texarkana Reservoir under Permit Numbered 1563b issued under date of April 18, 1968, by the Texas Water Rights Commission of the State of Texas, and the City under such Contracts and Permit has the right to sell all or any portion of the water available under such Contracts and Permit to municipal and industrial customers; and,

4) WHEREAS, under such Contract Numbered DACW 29-68-A-0103, City has agreed to fulfill the local interest requirements of the Water Supply Act of 1958, as amended,

and, therefore, is obligated to sell such water as may be available from Texarkana Reservoir to all municipal and industrial customers which may be served therefrom; and,

5) WHEREAS, City is further obligated under Permit Numbered 1563b issued by the Texas Water Rights Commission and the applicable laws of Texas to furnish water from Texarkana Reservoir, if available, to all persons who desire such services and who are within the area which may be served by its facilities; and,

6) WHEREAS, City has received requests from the Cities of Atlanta, Queen City, and Domino, all in Cass County, Texas, for water which may be furnished through facilities described herein, and City has approved water supply contracts with such cities; and,

7) WHEREAS, International Paper Company is constructing a paper mill and related plants in the vicinity of Texarkana Reservoir and is securing industrial water from City for the operation of its mill and plants under rates and charges established by City and upon the terms, conditions, provisions and limitations of this Agreement; and,

8) WHEREAS, Company, under Permit Numbered CP-57 issued under date of August 5, 1968, by the Texas Water Rights Commission, as extended by order of said Commission, is permitted to use water for industrial purposes originating in Texarkana Reservoir based on a Contract with City under the terms, conditions and limitations set forth in such Permit; and,

9) WHEREAS, large quantities of water to be provided Company under this Contract are necessary for use in connection with water pollution control facilities being financed through the issuance and sale by City of "City of Texarkana, Texas, Sewer Contract Revenue Bonds, Series 1971", in the principal sum of Three Million Two Hundred Fifty Thousand and No/100 Dollars ($3,250,000.00), which have a ruling of tax exemption from the Internal Revenue Service; and,

10) WHEREAS, City proposes to construct and own intake structures, pumps, structure housing the pumps, pipelines, a water treatment plant, a treated water distribution system, and related facilities on and in the vicinity of Texarkana Reservoir to provide the means of furnishing water for municipal, industrial, and

domestic purposes to all persons who desire such services, and who are within the area which may be served by the facilities, the same to be built in accordance with plans and specifications of City, and where necessary, approved by the contracting officer of the United States of America under Contract Numbered DACW 29-68-A-0103 and Contract Numbered DACW 29-69-C-0019, and where necessary, by the Texas Water Rights Commission; and,

11) WHEREAS, the construction and financing of the facilities to be built and owned by City is to be financed by the issuance and sale of City Revenue Bonds to be in the total principal par value of Eight Million Sixty Thousand and No/100 Dollars ($8,060,000.00), which sum is hereinafter referred to as "project cost", said bonds to mature, and to be serviced and paid pursuant to the provisions of City's bond ordinance;

NOW, THEREFORE, for and in consideration of the mutual promises, understanding, covenants, undertakings and considerations hereinafter set forth, it is agreed by and between the City of Texarkana, Texas, and International Paper Company as follows:

ARTICLE ONE

TERM OF AGREEMENT:

This Contract shall be effective on the day and year first hereinabove set forth, hereinafter designated as execution date.

The term of this Contract shall be thirty (30) calendar years beginning on the day designated as the dating of revenue bonds issued pursuant to Article Five of this Agreement, and terminating at midnight of the day next preceding the thirty-first (31st) calendar year from such beginning date, which term is hereby designated as the primary term of this Agreement; it being expressly provided, however, that in no event shall the primary term of this Contract extend beyond the first to occur of the following events:

a) The termination date of Contract Numbered DACW 29-69-C-0019 or Contract Numbered DACW 29-68-A-0103 between the United States of America and the City of Texarkana, Texas, whichever event shall last occur, or

b) Upon the termination of Contract Numbered DACW 29-69-C-0019 in the event such Contract Numbered DACW 29-68-A-0103 shall not be effective during the term of this Agreement,

M.D.
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c) Such time as the United States of America shall cease to operate Texarkana Reservoir, or

d) The expiration of the repayment period as defined in and provided for in Contract Numbered DACW 29-68-A-0103 between the City and the United States of America.

In the event the United States of America shall cease to operate Texarkana Reservoir, City will endeavor to continue to operate said Reservoir under contract with the United States of America as provided in Contract Numbered DACW 29-68-A-0103 and as may be permitted by law, in which event the parties hereto will negotiate the terms, conditions and rates of payment for the continuation of the primary term for the unexpired portion thereof, if any.

The term of this Contract and the obligations of City and Company hereunder are specifically made subject to the successful issuance and sale of revenue bonds contemplated by the provisions of Article Five of this Agreement with a ruling of tax exemption from Internal Revenue Service.

ARTICLE TWO

COMPANY OPTION TO EXTEND TERM:

Subject to the provisions of this Article, Company shall have the option to extend the term of this Agreement for a first extended term of ten (10) calendar years beginning as of the date of the termination of the primary term of this Agreement, and Company shall have a like right to extend the term for a second and third successive term of ten (10) years each, it being expressly provided, however, that in no event shall any of such extended terms extend beyond the first to occur of the following events:

a) The termination date of Contract Numbered DACW 29-68-A-0103 or DACW 29-69-C-0019 entered into between the City of Texarkana, Texas, and the United States of America, whichever event shall last occur;

b) Upon the termination of Contract Numbered DACW 29-69-C-0019 in the event such Contract Numbered DACW 29-69-C-0019 is not immediately succeeded by the operation of Contract Numbered DACW 29-68-A-0103;

c) Such time as the United States of America shall cease to operate Texarkana Reservoir; or,

d) The expiration of the repayment period as defined in and provided for in

Contract Numbered DACW 29-68-A-0103 between the City and the United States of America.

In the event the United States of America shall cease to operate Texarkana Reservoir, City will endeavor to continue to operate said Reservoir under contract with the United States of America as provided in Contract Numbered DACW 29-68-A-0103 and as may be permitted by law, in which event the parties hereto will negotiate the terms, conditions, and rates of payment for the continuance of any extended term and Company's option to extend the term of this Agreement as hereinabove provided not to exceed the permitted time of operation by City.

Nothing contained herein shall be construed to grant to Company the right to extend the term, or extended terms, of this Agreement in excess of a total of sixty (60) years from and after the beginning date of the primary term although the parties hereto at the expiration of said sixty (60) years may negotiate further extensions of this Agreement.

The exercise of the options herein granted to Company shall be conditioned upon City possessing on the effective date of the respective extended term an appropriate water permit from the Texas Water Rights Commission, or its successor, authorizing the diversion and appropriation of industrial water from Texarkana Reservoir in quantities equal to the maximum quantity deliverable under this Agreement to Company at the termination of the next preceding term and provided at the same time Company possesses an appropriate permit issued by the Texas Water Rights Commission or its successor for the use of such water.

It is further provided that in the event the quantity of such industrial water available to City to be sold to Company by City under the next preceding paragraph shall not equal the maximum quantity of water permitted to City by proper authorities and contracted for by Company at the termination of the last preceding term or extended term of this Contract, then the maximum quantity of water which shall be subject to options provided to Company shall be reduced in the same proportion that the reduction in the amount of industrial water available to City to be sold to Company bears to the maximum amount of water which was available to it to be sold to Company for the same purposes during the next preceding term.

City shall, at least six (6) months prior to the expiration of the primary and the first and second extended terms, if any, of this Agreement, give written notice to Company of the available quantity of water described above to be provided by City

under the next succeeding extended term, it being provided that Company shall have sixty (60) days thereafter within which to give written notice to City that it exercises the right to extend the term to the next succeeding extended term as hereinabove provided, and failure to give such notice of the exercise of such right shall terminate all rights of the Company under this Article and for any successive extended terms as provided herein. Upon the exercise of such option to extend the term, the City and Company shall be governed by all of the other terms and conditions of this Agreement for such respective extended term.

It is recognized by the parties hereto that prior to the expiration of the primary term, water storage space in Texarkana Reservoir available to City may be provided under Contract Numbered DACW 29-68-A-0103 above referred to, as well as the fact that such Contract may become effective during any such extended term as herein provided for. It is, therefore, expressly agreed that the rates of payment by Company for all water delivered or made available to Company prior to the effective date for water withdrawal under Contract Numbered DACW 29-68-A-0103 between City and the United States of America, shall be in accordance with the rates set forth in Article Ten of this Agreement, and such rates from and after the effective date for water withdrawal as provided in Contract Numbered DACW 29-68-A-0103 between City and the United States of America shall be in accordance with the Schedule likewise contained in Article Ten of this Agreement irrespective of whether the effective date for water withdrawal under Contract Numbered DACW 29-68-A-0103 occurs during the primary term or during any of the first, second or third extended terms of this Agreement.

ARTICLE THREE

FACILITY:

City covenants and agrees that within a reasonable time after the sale of the revenue bonds contemplated under Article Five of this Agreement and, if necessary, completion bonds contemplated under this Agreement, it shall, with due diligence, construct the following (hereinafter collectively referred to as "water facilities"): a) intake structures, pipelines, pumps, structure housing the pumps (hereinafter referred to as "water withdrawal and delivery facilities"), b) a water treatment plant, and related facilities (hereinafter referred to as "water treatment plant"); and c) facilities for transporting treated water from City's water treatment plant to municipal customers in Cass County, Texas, (hereinafter referred to as "treated water distribution system); all to be constructed in accordance with plans and

specifications of City approved, where necessary, by the contracting officer of the United States of America under Contract Numbered DACW 29-68-A-0103 and Contract Numbered DACW 29-68-C-0019, and, where necessary, by the Texas Water Rights Commission, such facilities to have capacities and capabilities as follows: a) the water withdrawal and delivery facilities shall consist of (1) an intake structure to be located at the point of diversion permitted and described by the Texas Water Rights Commission or its successor sufficient for the withdrawal from Texarkana Reservoir of 60.3 million gallons of raw water per day, and (2) a 42 inch transmission line from the intake structure to City's treatment plant, and (3) pumps sufficient to deliver to City's treatment plant a water supply of 30.2 million gallons of water per day at a maximum rate of 21,000 gallons per minute (47 cubic feet per second) through the 42 inch transmission line; b) the water treatment plant and related facilities to have a capacity and capability of treating 28,800,000 gallons per day of potable water of which it is contemplated that 22,000,000 gallons per day will be available for industrial purposes and 6,800,000 gallons per day will be available for municipal customers; and c) the treated water distribution system to have a capacity and capability of delivering 4,000,000 gallons per day of treated water to the municipal customers in Cass County, Texas, hereinbefore described.

Delivery of all other water contracted for herein by Company (hereinafter referred to as "downstream flow") shall be by release through the outlet facilities of Texarkana Dam of water from Texarkana Reservoir into Sulphur River for conveyance by the bed and banks of Sulphur River to a point downstream designated in the Permit issued to Company by the Texas Water Quality Control Board, or its successor having similar jurisdiction.

The water treatment plant and related facilities shall be constructed upon a site to be conveyed by Company to City without cost to City. City shall have such ingress and egress over Company property as is necessary for the construction and operation of the water treatment plant, and if circumstances indicate the advisability thereof, Company will by separate instrument or instruments grant to City without cost an easement or easements across Company property. City shall also have free access to come upon Company property at all reasonable times for the purpose of observing the condition and operation of the water treatment plant.

The intake structures, pumps, structure housing the pumps and pipelines (hereinafter collectively referred to as "water withdrawal and delivery facilities")

for delivery of raw water from Texarkana Reservoir to City's treatment plant, and the facilities for transporting treated water to municipal customers (hereinafter collectively referred to as "treated water distribution system") are to be located on sites to be acquired by City.

Company understands that the water facilities herein contemplated constitute a municipally owned public utility as authorized by Articles 1108 and 1111c, Texas Civil Statutes; that as Permittee under Permit No. 1563b granted City by the Texas Water Rights Commission and the applicable laws of Texas, City is obligated to furnish water, if available, to others in the area which may be served by its facilities. It is understood that the intake structures, and structures housing the pumps, part of the water withdrawal and delivery facilities, are designed for installation of additional pumps; and that City will from time to time as called upon enter into water service agreements with others who may be served in whole or in part through the aforementioned water withdrawal and delivery facilities, it being understood that City, by installation of additional pumps, has available for delivery through the 42 inch transmission line a supply of raw water to be furnished to others in addition to that herein contracted to be delivered to City's treatment plant for the furnishing of water to Company, and to the cities of Atlanta, Queen City, and Domino, and others desiring treated water in the service area. It is further understood that the water treatment plant is designed to supply 6.8 million gallons per day of treated water for municipal purposes, and that City has contracted to deliver to the Cities of Atlanta, Queen City, and Domino treated water by means of the "treated water distribution system" constructed with a capacity for delivery to municipalities and other customers of 4 million gallons per day out of the proceeds of the bonds herein described, and that 2.8 million gallons per day is available at City's treatment plant for furnishing treated water to others within the area which may be served by the treated water distribution system.

Notwithstanding the discharge of the series of bonds issued hereunder for the construction of the water facilities herein described, ownership of such facilities shall remain in City.

ARTICLE FOUR

MAINTENANCE OF WATER FACILITIES:

A) Acting for and on behalf of City, Company shall be responsible for the operation and maintenance of the water treatment plant as defined in Article Three at its sole cost and expense and shall operate and maintain the same in a

first class working condition and in compliance with all laws, rules and regulations of the United States of America and the State of Texas, as well as any state or federal regulatory agency having authority in that respect. All replacements and betterments to such water treatment plant shall be at City's expense, to be provided for solely out of the contingency fund as provided in subparagraph d) of Article Ten.

It is understood that the amount of treated water to be provided by the water treatment plant is to include, but shall not exceed 6.8 million gallons per day for City's treated water distribution system in addition to the treated water requirements of Company.

Notwithstanding any other provision of the Agreement, Company agrees that if for any reason whatsoever it shall be unable to operate the water treatment plant so as to provide City with 6.8 million gallons per day of treated water, City shall have the right to provide for the operation and maintenance of the water treatment plant to supply its requirements for treated water therefrom.

B) City shall have and assume full responsibility under the further terms of this Agreement for the expense of operation and maintenance of the intake structures, pumps, structure housing the pumps, and pipelines (herein referred to as water withdrawal and delivery facilities) for the delivery of raw water from Texarkana Reservoir to said water treatment plant and shall take reasonable measures in the operation and maintenance of same to prevent either an interruption or curtailment of service, or a substantial diminution of Company's water supply by reason of mechanical or equipment failure or insufficiency, or by reason of any interference with, or impairment of, its said water withdrawal and delivery facilities; and should any such interruption, curtailment, diminution or impairment develop, said City will take every prompt and reasonable means of repairing or rectifying the same, and of restoring such water withdrawal and delivery facilities to a condition fully adequate to meet the quantity specifications of this Agreement; provided, however, City shall have the right to interrupt or curtail such service where reasonably necessary for repairs, maintenance, and for cleaning of its lines to prevent deterioration in quantity and/or quality of water, and to maintain minimum pumping costs, such interruption or curtailment to be on reasonable notice to Company. Replacements and betterments of water withdrawal and delivery facilities other than additional pumps which may be installed by City to service City's future additional customers shall be paid out of the contingency fund as provided in sub-paragraph (d) of Article Ten. It is specifically understood that installation, operation and

maintenance, replacements and betterments of any additional pumps installed in the water withdrawal and delivery facilities by City to serve City's future additional municipal water customers shall be at City's sole expense.

C) City shall have and assume full responsibility for the operation and maintenance of the treated water distribution system, as well as replacements and betterments thereto, for the purpose of delivering treated water to Atlanta, Queen City, and Domino, and other municipal customers. Replacements and betterments of the treated water distribution system shall, however, be paid out of the contingency fund as provided in sub-paragraph (d) of Article Ten; all other expenses of operation and maintenance to be paid by City from operating revenues of such system.

ARTICLE FIVE

REVENUE BONDS:

Upon execution of this contract City shall proceed, under such applicable law as is available to it, with the issuance of revenue bonds in the amount of Eight Million Sixty Thousand and No/100 Dollars ($8,060,000.00), supported by this Contract the terms and specifications of such bonds being prescribed and set forth in the bond ordinance to be adopted by the City Council of City. The bond ordinance shall be prepared in such manner as will afford an option of redemption prior to the stated maturities. By its approval and execution hereof Company acknowledges that contract arrangements will result between City and the purchasers of the bonds by virtue of the terms and conditions of the bond ordinance, and Company recognizes that the proceeds of this Contract will be pledged by City in support of such bonds, and that accordingly the holders thereof shall possess a beneficial interest herein.

Upon written request by Company to City and payment by Company to City of such amounts as shall be required under the provisions of the bonds issued by City hereunder, City will exercise its option of redeeming such bonds prior to the stated maturities, and upon such payment and redemption the payment by Company of that portion of the Demand Charge required by paragraph (a) (1) of Article Ten for the payment of such redeemed bonds shall be proportionately reduced.

It is agreed that should the project cost exceed the amount of City revenue

bonds issued and to be paid for pursuant to the terms of this Agreement, City shall issue and sell parity completion bonds in the required amounts and the payments herein prescribed to be made by Company shall be increased accordingly without further modification of this Contract to provide all completion bond requirements including an increased reserve to be maintained in an amount not less than the average annual requirements of all bonds then outstanding.

Should there be any balance in the Construction Fund after all project costs are paid, said balance shall be placed in the Bond Debt Service Fund.

Company shall make all payments to City as demand charges as defined under Article Ten (a) (1) which are to provide the annual debt service requirements of the City's revenue bonds regardless of any default or failure of any nature on the part of either party under this Agreement, and regardless of any failure or default of any nature on the part of any agency upon which City must rely for power, authority, or its ability to provide water hereunder.

ARTICLE SIX

QUANTITY OF WATER:

City covenants and agrees to use all reasonable means to deliver to the water treatment plant by means of the water withdrawal and delivery facilities described in Article Three, and as permitted under City's Permit Numbered 1563b referred to above, an uninterrupted supply of water, not to exceed a peak demand per operating day of the quantities hereinafter set forth, or such demand as may be in effect hereunder by reason of an exercise of Company's option to extend the term of this Agreement as provided in Article Two:

a) Eighty-four million (84,000,000) gallons per operating day from and after the beginning date of the term of this Agreement, until the effective date of water withdrawal as provided in Contract Numbered DACW 29-68-A-0103 between City and the United States of America; and,

b) The amount of One Hundred Five Million Four Hundred Thousand (105,400,000) gallons per operating day from and after the effective date of water withdrawal under said Contract Numbered DACW 29-68-A-0103, during the term or any extended term of this Agreement.

Company shall have the option to have such quantity of water in excess of the amount to provide the 6.8 million gallons per day for City's treated water distribution system, to be delivered to Company through City's treatment plant, or to

be delivered as downstream flow by the bed and banks of Sulphur River to the point described in Article Three, it being provided, however, that the amount of water to be elected by the Company to be delivered to it through City's water treatment plant shall not be of a quantity which together with the 6.8 million gallons per day for City's treated water distribution system shall in the aggregate exceed at any time the stated maximum pumping capacity of the water withdrawal and delivery facilities to supply to City's treatment plant a water supply of 30.2 million gallons of water per day at a maximum rate of 21,000 gallons per minute (47 cubic feet per second), nor shall such Company's election for downstream flow exceed the amount permitted to be released through the outlet facilities of Texarkana Dam as shall be determined by the Corps of Engineers, United States Army, or their successors having jurisdiction over the operation of Texarkana Reservoir; it being further provided that the aggregate of water to be delivered under the terms of this Contract shall not exceed 29 billion, 400 million gallons per calendar year of this Agreement during the interim government contract period and 36 billion, 890 million gallons per calendar year during the permanent government contract period.

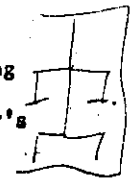
It is expressly provided, however, that the right of Company to utilize water to be delivered by City under this Agreement in quantities not to exceed the maximum quantities per day as hereinabove set forth are not cumulative, and failure of Company to utilize the maximum allowable quantity for any given day shall not increase the allowable quantity for any succeeding day, day being defined herein as the twenty-four hour period beginning 12:01 a. m. and ending at midnight of such calendar day.

Election by the Company as to quantities of water to be delivered by City through City's water treatment plant or as downstream flow as hereinabove defined, shall be given in writing to City sixty (60) days prior to the first delivery of water under Article Six of this Agreement and the allocation of water between the water treatment plant and downstream water shall not thereafter be altered by Company except upon written notice delivered to the agent of the City as shall be designated in writing from time to time by City for the purposes of this Agreement, such notice to be delivered within a reasonable time prior to the requested alteration of allocation.

It is provided that Company shall have no contracted obligation imposed by this Agreement as to the number of its mill operating days per year, nor as to any

minimum quantity of water to be delivered to it per operating day by City's water facilities above described.

"Operating day" as used in this Agreement means any calendar day during which Company receives delivery of any water under this Agreement from City's facilities or as downstream flow.



ARTICLE SEVEN

ADDITIONAL QUANTITY OPTION:

In the event City shall obtain during the term or any extended term of this Agreement the right to utilize storage space in Texarkana Reservoir for municipal and industrial water supply in addition to that now provided under Contract Numbered DACW 29-69-C-0019 and Contract Numbered DACW 29-68-A-0103 by reason of amendments or supplements to such respective contracts or under any successor contract or contracts negotiated in lieu thereof, and the City shall have the right under contracts between City and the United States of America and Permits issued to it by the Texas Water Rights Commission or its successors or other agency having jurisdiction thereof, to permit the industrial use of any part of such additional industrial water and City shall offer the same for such use, the Company is granted the first right to purchase from City the portion thereof so offered for industrial use upon the terms, conditions and prices so offered by City as additional quantity of water as shall equal 86.1326 per cent (120,000/139,320) of such additional industrial water so offered, but in no event shall the additional purchases by Company under the terms of this Agreement, under any one or more offerings be in excess of the total of 30,000,000 gallons per day.

Notice of such offer shall be given by City to Company as provided for other notices herein, it being provided the Company shall exercise its right of purchase of such additional quantity of water or any stated part thereof in the manner and within the time as shall be specified in such offering, and failure to exercise Company's option herein granted in the manner and within the time contained in such offering shall constitute a forfeiture of its right thereto.

ARTICLE EIGHT

METERING:

a) City shall install devices to measure and record daily by means of

recognized and commercially acceptable metering equipment the quantity of water delivered to City's water treatment plant, to Company, to City's treated water distribution system, to City's municipal or other customers, as well as such equipment required under paragraphs b) and c) of this Article, statements of which shall be furnished to Company as hereinafter provided in Article Eleven of this Agreement.

Cost of installation of such meters and equipment shall be included in project cost. Company shall have access to such metering equipment at reasonable times for inspection and examination, but the reading, calibration, and adjustment thereof shall be done only by employees or agents of City. All readings and records of metering will be entered upon proper books of record by City. City shall periodically inspect the calibration of its meters and shall make such adjustments as found to be necessary; provided, such inspections shall be made at such times as shall be required by any regulatory agency having jurisdiction thereof. Company, at its option, may have a representative present at times such meters are inspected, calibrated, or adjusted.

If, upon any test, the percentage of inaccuracy of any meter is found to be in excess of two per cent (2%), registration thereof shall be corrected for a period of time extending back to the time when such inaccuracy began, if such time is ascertainable, and if such time is not ascertainable, then for a period extending back one-half (1/2) of the time elapsed since the date of the last calibration, but in no event further back than a period of six (6) months. If, for any reason, any meters are out of service or out of repair so that the amount of water cannot be ascertained or computed from a reading thereof, the amount of water during the period such meters are out of service or out of repair shall be estimated and agreed upon by the parties hereto on the basis of the best data available.

b) Metering of downstream flow as provided in this Agreement shall be in accordance with the regulations of the Corps of Engineers of the United States Army governing the Contracts between City and the United States of America as hereinabove described as approved by the Texas Water Rights Commission, or its successor.

c) City shall install and maintain such continuous reservoir content and lake level measuring station as required by any permit issued to City by Texas Water Rights Commission or its successor under which water is delivered under this Contract.

ARTICLE NINE

QUALITY OF WATER:

City agrees that all water delivered to City's water treatment plant shall be, and Company agrees that such water shall be, the raw reservoir water from Texarkana Reservoir. It is contemplated by this Agreement that the quality of such water shall be consistent with the water quality requirements applicable to Texarkana Reservoir as shall be determined from time to time by the Texas Water Quality Board, or such other successor agency of the State of Texas having jurisdiction thereof.

If at any time during the term or extended term of this Agreement Company shall determine that the quality of said water is changing or deteriorating, or has changed or deteriorated, to an extent or degree that said quality has fallen, or may reasonably be expected to fall, below the water quality requirements determined by such Board or successor agency, and shall notify City of such fact in writing, City covenants and agrees that, unless such change or deterioration is caused by or due to the negligence or willful and intentional act or acts of Company or its permitted assigns hereunder, City will forthwith and with the utmost diligence take whatever action as shall be available to it and as may be necessary, advisable or expedient to cause such Board or any other governmental agency, state or federal, that may be lawfully authorized to act in such matters, to correct and eliminate the cause or source of such change and deterioration, and to restore such water to a quality equal to, or better than, the water quality requirements determined by the Texas Water Quality Board, or other successor agency of the State of Texas having jurisdiction thereof; it being expressly provided that in any such event Company shall not be relieved of its obligations to make such payments as are specified in Article Ten.

ARTICLE TEN

WATER RATES:

Company covenants and agrees to pay to City throughout the term or any extended term of this Agreement (except as otherwise expressly provided in subparagraph (a) (1) of this Article) a monthly demand charge, a monthly delivery

charge, and such other charges calculated in accordance with the following schedules and formulas which collectively shall constitute the water rates established by the City for water supplied under this Agreement:

a) DEMAND CHARGE: The monthly demand charge shall be the total of the following specified items:

1) Notwithstanding any default or event which may result in the termination of this Agreement, Company agrees that as a separate and independent covenant that so long as there remains outstanding any water revenue bonds issued under Article Five and beginning on the 20th day of the twenty-fourth (24th) month next succeeding the revenue bond date, and on the 20th day of each month thereafter, Company shall pay to City a sum of money equal to one-sixth of the amount of the next semiannual installment of bond interest and one-twelfth of the next annual installment of bond principal; provided, that any funds on hand in the Debt Service Fund from excess Construction Funds or otherwise may, at Company's option, be applied in lieu of the aforementioned Company payment to the extent of such available funds. With each such payment there shall be included all such charges as may be imposed on City with relation to the payment of said respective installments of principal or interest including those of the paying agent or agents named in the bond ordinance.

2) An amount equal to one-twelfth of the annual payment due by City to the United States of America under Contract Numbered DACW 29-69-C-0019, until the effective date of water withdrawal under Contract Numbered DACW 29-68-A-0103 between City and the United States of America and from and after the effective date of water withdrawal under said Contract Numbered DACW 29-68-A-0103, a sum equal to one-twelfth of 86.1326% of the annual payment to be paid by City to the United States of America under said Contract Numbered DACW 29-68-A-0103.

City shall notify Company upon the receipt of notice of the effective date of water withdrawal as provided in Contract Numbered DACW 29-68-A-0103, and the rates herein specified to be paid during the permanent government contract period shall become effective on such effective date of water withdrawal. Nov 14, 1972

It is expressly recognized that the Demand Charge herein stipulated to be paid after the effective date of such Contract Numbered DACW 29-68-A-0103 is

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based in part upon the estimated first cost as set forth in Exhibit "C" to such Contract Numbered DACW 29-68-A-0103 which is subject to adjustment in accordance with the provisions of Paragraph b of Article Six of such Contract DACW 29-68-A-0103, and it is expressly provided that the monthly demand charge hereinabove provided for to be paid after the effective date of water withdrawal as provided in said Contract, whether occurring during the primary or any extended term of this Agreement, shall be increased or decreased upon the determination of the actual first cost under such Contract in accordance with the following formula:

> An amount equal to one-twelfth of 86.1326% of the increase or decrease in the annual charges to be paid by City to the United States of America under Contract Numbered DACW 29-68-A-0103 as repayment of allocated first cost as computed under said Contract in accordance with Paragraph 6 (b) of said Contract DACW 29-68-A-0103.

Company agrees that as consideration for City's undertakings and regardless of the actual quantity or quality of water received by it, during the primary term or any extended term of this Contract, Company will pay the demand charges hereinabove prescribed.

b) DELIVERY CHARGE:

1) Operation and Maintenance of water withdrawal and delivery facilities:

Throughout the term or any extended term of this Agreement Company agrees to pay for all operating costs of the water withdrawal and delivery facilities, and all metering required under Article Eight other than metering of treated water delivered to or by City's treated water distribution system, including cost of maintenance, metering, labor, power, chemicals, physical damage and public liability insurance for purposes and in amounts which would ordinarily be carried by a privately owned utility company in the operation and maintenance of similar facilities, and all other expenses of City, including costs of City under Paragraph (B), Article Four, any water, use, sale, ad valorem tax, or other taxes or assessments levied or assessed by any political unit or subdivision other than the City of Texarkana, Texas, allocated general administrative cost incurred by City in the administration and general supervision of this contract and the operation and maintenance of the water withdrawal and delivery facilities, such reasonable general administrative cost to include (without limiting the generality of the foregoing) City's supervision, engineering, accounting, auditing and legal expense. In the administration of this Contract, City agrees to maintain a separate record of accounts relating to this Contract and the operation and maintenance of the water withdrawal and delivery facilities in accordance with the

covenants contained in the bond ordinance.

City further covenants and agrees that it will operate such water withdrawal and delivery facilities as economically as is consistent with good operational practices.

For the purpose of this paragraph, it is estimated that such costs for the first calendar year after the date of the first delivery of water by means of such water withdrawal and delivery facilities will be in the amount of Fifty-eight Thousand and No/100 Dollars ($58,000.00), and beginning on the date of first delivery of water Company shall pay to City during the first calendar year such annual estimated cost in monthly payments commencing on such date, it being agreed that from and after the expiration of the first calendar year the cost of operation and maintenance as herein defined shall be adjusted to the actual cost thereof, at which time the Company shall pay to City any deficit remaining after application of the prior monthly payments to said actual costs and thereafter Company shall pay to City one-twelfth of the previous calendar year's actual cost of such operation and maintenance, with like adjustment to the expiration of each calendar year during the term or any extended term of this Agreement. In the event taxes of any nature, including use, sales, ad valorem taxes or other taxes or assessments levied or assessed by any political unit or subdivision other than the City of Texarkana, Texas, be imposed upon any product or feature relating to or resulting from construction, ownership by City or operation of the water treatment plant, the amounts thereof shall be borne by Company in addition to other charges herein prescribed, and should City be required to pay, collect or remit any such amounts, Company shall promptly reimburse City therefor.

2) Contract Service Charge:

A sum equal to one-twelfth of one-half of one per cent of the total par value of the City's revenue bonds issued under this Agreement, payable monthly throughout the term or any extended term of this Agreement regardless of the prior retirement of any of such bonds.

It is specially provided that should City fail to deliver water to Company due to causes enumerated in Paragraph (A) of Article Twelve of this Agreement,

and such failure shall continue for any successive six (6) months period, payment of such Contract Service Charge shall thereafter be suspended until the month in which delivery of water by City is restored.

c) DEBT SERVICE RESERVE FUND:

Company recognizes that a Debt Service Reserve Fund to be set aside out of the proceeds of the bonds is to be invested in accordance with the provisions of the bond ordinance and that so long as said Debt Reserve Fund is maintained at the minimum provided therefor, the income from the investments shall be deposited in the Debt Service Fund and applied in reduction of the payments required of Company under the provisions of sub-paragraph (a) (1) of this Article. Company understands and agrees that should, for any reason, this Debt Service Reserve Fund be depleted in any amount that cannot be restored from the investments thereof, it shall be restored to the established minimum by equal monthly payments to be made by Company and extending over a period of not to exceed twelve (12) months, such to be billed to Company pursuant to the arrangements for the payment of charges by Company as set forth herein.

d) CONTINGENCY FUND:

Company recognizes that the contingency fund for extraordinary or emergency repair or restoration, or for improvements or betterments required by the water facilities is being established from the proceeds of the sale of the City's revenue bonds. All income therefrom is to be paid to City. Company agrees that should it be necessary to employ the contingency fund for such extraordinary or emergency repair or restoration, or for replacements, improvements or betterments within the scope of the presently planned water facilities (not including any additional pumps installed in the water withdrawal and delivery facilities to serve City's additional municipal customers therefrom) to such extent as to deplete such fund below Two Hundred Thousand and No/100 Dollars ($200,000.00), Company shall restore such fund to that amount by equal monthly payments over a period of not to exceed twelve (12) months from the time of the deficit and that should the repairs, replacements or betterments require funds in excess of the amount at the time on hand in the contingency fund, Company shall provide all excess sums. It is agreed and understood that City shall not employ the contingency fund for major

expenditures without first procuring the written advice and recommendation of an independent consulting engineer agreeable to Company with regard to the necessity and advisability thereof, nor shall the contingency fund be used for repairs, replacements or betterments of any additional pumps installed in the water withdrawal and delivery facilities to serve City's additional municipal customers therefrom.

c) City agrees that from the gross income received from the sale of treated water from the treated water distribution system there shall be paid monthly the following:

1) There shall first be paid by City its total costs in operating and maintaining the treated water distribution system, such costs to include cost of maintenance, metering, labor, power, chemicals, physical damage and public liability insurance for purposes and in amounts as would ordinarily be carried by a privately owned utility company in the operation and maintenance of similar facilities, any water use, sale, ad valorem tax, or other taxes or assessments levied or assessed by any political unit or subdivision other than the City of Texarkana, Texas, allocated general administrative cost incurred by City in the administration and general supervision of the operation of the treated water distribution system, such general administrative cost to include City's supervision, engineering, accounting, auditing, and legal expense. City agrees to maintain a separate record of accounts relating to the operation and maintenance of the treated water distribution system to the same extent as maintained relating to the operation and maintenance of the water withdrawal and delivery facilities.

2) Secondly, in the event payment for replacements and betterments of the treated water distribution system has been made under Article Four (c) from the contingency fund established under Article Ten (d), the remaining gross income shall be paid into the contingency fund until such payment has been fully reimbursed.

3) From any balance of gross income received, City shall pay into the Debt Service Fund established by the Bond Ordinance, an amount equal to the proportionate amount of the total principal and interest required to be paid monthly to amortize the bonds issued under this Agreement (not including any capitalized interest and reduced by the amount of excess construction funds credited to Debt Service Fund)

and that portion of the Demand Charge required by sub-paragraph (a) (1) of Article Ten shall be proportionately reduced.

4) There shall next be paid from any remaining balance of gross income received to Company (or at Company's option credited upon Company's Demand Charge) such amount as Company shall have incurred during the next preceding calendar month as operating and maintenance cost in treating such treated water as is withdrawn from the water treatment plant by City for distribution through City's treated water distribution system, and Company agrees that it will operate City's water treatment plant as economically as is consistent with good operational practices.

5) Any remaining balance of gross income received shall be paid by City into the Debt Service Fund established by the Bond Ordinance, and that portion of the Demand Charge required by sub-paragraph (a) (1) of Article Ten shall be proportionately reduced, such payment to continue until such time as the aggregate amounts of such payments shall equal the proportionate amount of the total principal and interest required to amortize the bonds issued under this Agreement (not including any capitalized interest and reduced by the amount of excess construction funds credited to Debt Service Fund) as the experienced construction cost of the treated water distribution system bears to the total amount of principal and interest of bonds (including completion bonds) issued pursuant to this Agreement (not including capitalized interest and reduced by the amount of excess construction funds credited to Debt Service Fund).

In the event any portion of such aggregate amount shall not have been fully paid by such time as the bonds issued under this Agreement have been retired, such amount shall be credited upon amounts to be paid by the Company as Demand Charge under sub-paragraph (a) (2) of Article Ten of this Agreement.

In the event the total amount to be paid under this paragraph has not been fully paid upon termination of this Agreement, such remaining balance of gross income received shall, in such event, be paid to Company until such aggregate amount has been fully paid.

ARTICLE ELEVEN

TIME AND PLACE OF PAYMENT:

Except as otherwise provided in sub-paragraph (a) (1) of Article Ten, all payments to be paid by the Company under this Agreement shall be payable monthly in advance, the first such payment to be due and payable on the 20th day of the

month next preceding the month in which the first delivery of water is made under this Agreement, and thereafter, on the 20th day of each succeeding month during the term or any extended term of this Agreement.

After the first month in which delivery of water is made under this Agreement, City shall furnish to Company prior to the 10th day of each calendar month in which any payment is due hereunder during the primary and any extended term of this Agreement, a statement showing the aggregate charges due and payable by Company under this Agreement in that month and payment therefor shall be due to the City by the 20th day of the month of the rendition of the statement.

All payments shall be made by Company to City at the office of the City Secretary of the City of Texarkana, Texas, in Texarkana, Bowie County, Texas, and Demand Charges as provided herein shall be made when due without further notice or billing by the City.

ARTICLE TWELVE

FORCE MAJEURE:

(A) Should the ability of City to comply with its several obligations hereunder or Company's ability to utilize or use the water contracted to Company hereunder, or Company's ability to operate the water treatment plant be prevented, impaired, curtailed or delayed by reason of fire, windstorm, strike, riot, civil commotion or act of God, or any other similar cause, or reason beyond the control of the parties so affected, it is understood and agreed that neither party shall be liable to the other for any direct or consequential damages caused by, resulting from, or attributable to such inability to perform, it being expressly provided, however, that this provision shall not relieve Company of its obligation to make payment of the charges provided under Article Ten of this Agreement unless otherwise specially provided therein.

(B) Nothing in this Article is intended, nor shall it be construed as any impairment or waiver of any right or cause of action which either party might lawfully be entitled by reason of any loss or damage sustained by such party by reason of willful or intentional breach of a material provision of this Agreement or a wrongful refusal on the part of the other party to perform its several obligations hereunder.

ARTICLE THIRTEEN

WARRANTY:

The parties hereto stipulate that no representation or warranty has been made or undertaken by the City as to the quantity or quality of water which may be furnished to Company under this Agreement under Contract Numbered DACW 29-69-C-0019 or Contract Numbered 29-68-A-0103 between City and the United States of America, and amendments or supplements thereto, or any successor contract or contracts negotiated in lieu thereof, or that the same is suitable for any intended use by Company; provided, however, City undertakes to use reasonable means to avoid any deterioration in the quality of water which may be utilized by the Company hereunder which may result from the direct acts of the City of Texarkana, Texas.

City's obligation to deliver water under this Agreement, both as to quantity and quality, is expressly made subject to any priority of rights set forth in Contract Numbered DACW 29-68-A-0103 or Contract Numbered DACW 29-69-C-0019 between City and the United States of America and any amendments or supplements thereto, or any successor contract or contracts negotiated in lieu thereof, as well as such priority set forth in any permits granted to City by agencies of the State of Texas having jurisdiction thereof.

ARTICLE FOURTEEN

RELEASE OF CLAIMS:

a) Except to the extent City's liabilities, if any, are within the coverage of public liability insurance and workmen's compensation insurance contemplated under Paragraph (b) (1) of Article Ten, Company shall hold and save City, including its officers, agencies and employees, harmless from liability of any nature or kind for or on account of any claim for damages which may be filed or asserted as a result of the storage in Texarkana Reservoir or withdrawal or release of water from Texarkana Reservoir made or ordered by the City under Contracts Numbered DACW 29-69-C-0019 and DACW 29-68-A-0103, and any amendments or supplements thereto, or any successor contract or contracts negotiated in lieu thereof, in the performance of this Contract between City and Company, as well as on account of the delivery of water to the water treatment plant as defined herein and the operation and maintenance by Company of the water treatment plant as defined in Article Three.

b) It is further recognized by Company that no payment by City of any obligation assumed by, or imposed upon, City by virtue of this Contract shall be from funds raised, or to be raised, by taxation by City, and Company shall not have the right to demand payment from City from such funds. City's obligations under this Contract or arising herefrom, whether to Company or otherwise, shall never be construed to be a debt of City of such kind as to require it to levy and collect a tax to discharge such obligations.

ARTICLE FIFTEEN

DEFAULT:

In the event of breach or default by the Company of any of its obligations under the terms of this Agreement, City shall give Company notice of such breach or default, and except as otherwise provided in this Agreement, Company shall have sixty (60) days thereafter within which to cure and rectify such breach or default. Upon failure of Company to so cure or rectify such breach or default, City, at its option may declare Company's rights to receive and utilize water contracted for under this Agreement forfeited; provided, however, forfeiture of such right shall not relieve Company of any of its obligations under this Agreement.

ARTICLE SIXTEEN

REDUCTION IN COMPANY REQUIREMENTS:

A) It is recognized by the parties hereto that Company requirements for the quantity of water permitted to Company by this Agreement may be decreased from time to time due to technological improvements in processes, techniques, equipment or similar causes, and in such event Company shall have the right at any time during the primary or any extended term of this Agreement, to give to City written notice of the diminished quantity required by Company and any quantity of water stated in millions of gallons per day the Company desires to release to City for sale or other disposition by City, stating therein the date upon which said release may be effective. Upon receipt of such notice City will make diligent effort to sell such surplus water to other parties, and City shall, after receipt of such notice, have a continuing option during the remainder of the primary term or any extended term of this Agreement, to accept such release at such time as shall be stated by City in written notice to the Company, and upon the exercise of such option, the

amount of payments due by Company under this Agreement shall be reduced by the proportion of such payments determined by the ratio of the quantity of water released to the maximum quantity of water contracted to Company under this Agreement at the effective date of such release where applicable. It is expressly provided, however, that no reduction or waiver of payment by Company under this Article shall be effective until the effective date stated by City upon City's exercise of the option provided to it herein, provided, however, that nothing herein contained shall relieve Company from the obligation to pay that portion of the demand charge specified as payment of principal or interest on the bonds issued under the provisions of Article Five.

B) Failure of Company to take delivery of water from the water treatment plant hereinabove defined for any consecutive five (5) years during the term or any extended term of this Agreement shall automatically give to City the continuing option during the remainder of the primary or any extended term of this Agreement to sell or otherwise dispose of the water herein contracted to Company, it being expressly provided, however, that nothing herein contained shall relieve Company from the obligation to pay that portion of the Demand Charge specified as payment of principal or interest on the bonds issued under the provisions of Article Five.

ARTICLE SEVENTEEN

EXCLUSIVE SUPPLY:

During the primary term or any extended term of this Agreement, Company agrees that it will purchase from City all of Company's requirements of industrial or commercial water for use in the vicinity of Texarkana Reservoir, save and except Company shall have the right to utilize from its own facilities, or to acquire from any other source, water necessary for special purposes as may be required in its operation for drinking water, boilers and other similar special uses.

During such time as City is unable to supply from Texarkana Reservoir the quantity of water herein contracted for due to decrease in City's available supply from such Reservoir, Company shall have the right to obtain its requirements of industrial or commercial water from other sources available to Company.

ARTICLE EIGHTEEN

ASSIGNMENT BY COMPANY:

All water contracted to Company under this Agreement shall be exclusively

used by Company for the operations of a pulp and paper plant and manufacturing facility of Company, and in any other related commercial or industrial operation of Company in vicinity of Texarkana Reservoir, but no such water or right thereto shall be assigned or resold directly or indirectly by Company to any others except upon the written consent of City. It is provided, however, that in the furtherance of operation of Company's plant, Company may use or sell any such water in or to any plant or plants leased to or operated by Company or in or to any plant or plants in which Company shall own an interest, or in or to plants leased to or operated by plant or plants in which Company shall own an interest and which are located within six (6) miles of the point of diversion as hereinabove referred to at Texarkana Reservoir, and any such use or sale shall not be considered a prohibited assignment or resale under this Article. Company may likewise use or sell treated water allocated to Company and originating under the terms of this Agreement to any other plant or plants located within six (6) miles of the point of diversion as hereinabove referred to engaged in the supplying, production or processing of supplies or products used by Company in its own plant, or which are engaged in manufacturing, producing or processing other products utilizing any products or by-product of Company's plant and any such use or sale of such treated water shall not be considered a prohibited assignment or resale under this Article.

No assignment, sale or permitted use by others under this Article shall relieve Company from any payments or obligations to be performed by Company hereunder unless expressly released in writing by City.

Notwithstanding any provision contained in this Article, Company's use of water hereunder shall in no event exceed the permitted use described in Permit CP-57, or any amendments or supplements thereto.

ARTICLE NINETEEN

SUCCESSION OF INTEREST:

The provisions of this Agreement shall inure to the benefit of, and shall be binding upon, the successors and permitted assigns of City and Company, but no such succession or assignment shall relieve either City or Company of their respective responsibilities hereunder without the express written consent of the other party hereto, and provided further that so long as there remains outstanding and unpaid any of the water revenue bonds issued or to be issued to finance the construction of the water facilities under this Agreement, no such succession or assignment shall be valid or binding without the prior written consent of the

holders of at least seventy-five per cent (75%) in value of the then outstanding water revenue bonds.

The obligation of City for delivery of water to Company hereunder, Company's contractual right thereto, and Company's obligations hereunder shall be continuous as herein provided and shall not be terminated in the event or events contracts or agreements are voluntarily negotiated between City and the United States of America to succeed or supplant Contract Numbered DACW 29-68-A-0103 and Contract Numbered DACW 29-69-C-0019, or either of them, under which the United States continues to operate Texarkana Reservoir, during the primary or any extended term of this Agreement.

ARTICLE TWENTY

CONTRACT CONSTRUCTION:

The provisions of this Contract shall be construed under and according to the laws of the State of Texas, and the performance hereunder and all rights herein contracted to either party shall be subject to all of the rules, regulations and laws applicable thereto passed or promulgated under the authority of the United States of America governing Texarkana Reservoir, as well as the rules, regulations and laws of the State of Texas, or any other governmental, administrative or regulatory agency having lawful jurisdiction over the withdrawal from or use of water therein.

ARTICLE TWENTY-ONE

MODIFICATION:

Modification of this Agreement, except as otherwise provided herein, may be requested by either party upon the giving of ninety (90) days written notice stating the requested changes or modifications requested and to be considered, at which time bona fide negotiations shall be undertaken as to the modifications or changes submitted. It is recognized, however, that except as otherwise provided herein, this contract may not be changed or modified except with the written consent of City and Company by written amendment or supplement to this Agreement, and no change or modification of this Agreement may be made which will affect adversely or cause a violation of the provisions of the City's ordinance authorizing the issuance of its bonds referred to in Article Five hereof.

ARTICLE TWENTY-TWO

NOTICES:

Unless and until either of the parties hereto is notified to the contrary in

writing, any notices required by the provisions of this Agreement shall be deemed effectively served, delivered and received if mailed by registered or certified mail with postage prepaid as follows:

a) To City:

The City Manager

The City of Texarkana, Texas, Texas Municipal Building

Texarkana, Texas

b) To Company:

International Paper Company

P. O. Box 2328, Mobile, Alabama, 36601, and at the General Office of Company's Texarkana Plant.

IN WITNESS WHEREOF, City and Company have caused these presents to be signed and attested by their duly authorized officers, and the respective official seals to be hereunto affixed, in duplicate original counterparts, on the day and year first hereinabove set forth.

INTERNATIONAL PAPER COMPANY

ATTEST: _____
Asst. Secretary

By: _____
Vice President

APPROVED AS TO FORM
By _____
LEGAL DEPT.
Southern Div.
IPCo.

CITY OF TEXARKANA, TEXAS

ATTEST: _____
City Secretary
City of Texarkana, Texas

By: _____
City Manager

APPROVED AS TO FORM:

_____
City Attorney
City of Texarkana, Texas

WATER FACILITIES EXPANSION CONTRACT

BETWEEN

THE CITY OF TEXARKANA, TEXAS

AND

INTERNATIONAL PAPER COMPANY

THIS AGREEMENT made and entered into as of the 1st day of August, 1977, by and between the CITY OF TEXARKANA, TEXAS ("City") and INTERNATIONAL PAPER COMPANY, a New York corporation authorized to do business in the State of Texas ("Company"):

W I T N E S S E T H :

WHEREAS City has heretofore acquired and constructed a complete and independent water supply system ("Existing System") designed to provide water requirements of Company and members of the general public within its service area under permits possessed by City and Company authorizing the diversion, appropriation and use of waters from Texarkana Reservoir (now Wright Patman Lake) for such purposes; and

WHEREAS the financing, acquisition and construction of the Existing System has been accomplished pursuant to the terms of a water supply contract between the City of Texarkana, Texas, and International Paper Company dated October 11, 1971 ("1971 Agreement") by virtue of which City has issued and sold its Series 1971 Bonds payable from and secured by contract payments being derived by City from Company for such purposes; and

WHEREAS, by reason of expansions to its paper mill in Cass County, Company's requirements for treated water will be considerably greater than that afforded by the Existing System, and accordingly Company has requested arrangements similar to those reflected in the 1971 Agreement whereby City will acquire and construct water facility expansions with respect to the Existing System affording an increase in the water supply which may be provided Company but within the limits of those maximum amounts to which Company is entitled under the 1971 Agreement; and

WHEREAS City is agreeable to the accomplishment of the aforementioned purposes through employment of the methods hereinafter set forth which will include provisions for additional treated water on reasonable demand to members of the general public in the System's service area; and

WHEREAS the Water Facilities Expansion Project will be constructed in accordance with plans and specifications approved by City and financed through the issuance and sale of City revenue Bonds ("Series 1977 Bonds") whose payment will be secured under the provisions of this 1977 Agreement in the same manner as the Series 1971 Bonds are secured under the provisions of the 1971 Agreement, the specifications and conditions for said Series 1977 Bonds to be prescribed under the terms and conditions of the City's ordinance authorizing the issuance of such bonds;

NOW, THEREFORE, in consideration of the mutual promises, undertakings, covenants and considerations hereinafter set forth, it is agreed by and between the parties hereto as follows:

ARTICLE ONE

DEFINITION OF TERMS:

1.01: Unless the context hereof shall indicate a contrary meaning or intent, the terms below defined for all purposes hereof shall be construed to have meanings as follows:

(a) "Existing System" - The complete and independent water supply treatment and delivery system consisting of withdrawal, delivery and treatment facilities acquired and constructed by City pursuant to the 1971 Agreement.

(b) "Water Facilities Expansion Project" or "Project" - The extensions, improvements and betterments which will constitute expansions to the Existing System and which are to be financed, acquired and constructed pursuant to this 1977 Agreement.

(c) "Expanded System" - The Existing System as expanded by the Water Facilities Expansion Project.

(d) "1971 Agreement" - The Water Supply Contract between the City of Texarkana, Texas and International Paper Company executed as of October 11, 1971, whereby the Existing System was financed, acquired and constructed by City, which Contract shall continue to be in full force and effect by its own terms.

(e) "1977 Agreement" - The within Water Facilities Expansion Contract between the City of Texarkana, Texas, and International Paper Company.

(f) "Series 1971 Bonds" - The City of Texarkana, Texas, Water Contract Revenue Bonds, Series 1971, dated December 1, 1971, authorized by ordinance of the City Council of the City of Texarkana, Texas, November 22, 1971, in the original principal sum of $8,060,000, payable from and secured by proceeds derived by City from Company pursuant to the 1971 Agreement.

(g) "Series 1977 Bonds" - The bonds contemplated to be authorized by the City Council of the City of Texarkana, Texas, pursuant to and secured by this 1977 Agreement.

(h) "Water Withdrawal and Delivery Facilities" - The intake structures, structures housing pumps, pumps, pipelines and related items of the Expanded System which are or will be employed in delivering raw water from Lake Wright Patman to City's treatment plant.

(i) "Treated Water Distribution System" - The pumps, pipelines and related items which are being or will be employed in transporting treated water from the treatment plant of the Expanded System to municipal or other customers.

(j) "Interim Contract (Water)" - The contract executed as of the 9th day of February, 1976 by the parties hereto which, in anticipation of this 1977 Agreement, provided means of financing initial expenses incurred in the acquisition and construction of the Water Facilities Expansion Project pending the availability of proceeds of the City's revenue bonds.

ARTICLE TWO

EFFECTIVE DATE AND TERM OF AGREEMENT:

2.01: This 1977 Agreement shall be effective on the day and year first hereinabove set forth, hereinafter designated as execution date.

2.02: The term of this 1977 Agreement shall be thirty (30) calendar years beginning on the day designated as the dating of revenue bonds issued pursuant to Article Five hereof and terminating at midnight of the day next preceding the thirty-first (31st) calendar year from such beginning date, which term is hereby designated as the primary term of this 1977 Agreement; it being expressly provided, however, that in no event shall the primary term of this 1977 Agreement extend beyond the first to occur of the following events:

(a) The termination date of Contract Numbered DACW 29-69-C-0019 or Contract Numbered DACW 29-68-A-0103 between the United States of America and the City of Texarkana, Texas, whichever event shall last occur, or

(b) Upon the termination of Contract Numbered DACW 29-69-C-0019 in the event such Contract Numbered DACW 29-68-A-0103 shall not be effective during the term of this 1977 Agreement, or

(c) Such time as the United States of America shall cease to operate Texarkana Reservoir, or

(d) The expiration of the repayment period as defined in and provided for in Contract Numbered DACW 29-68-A-0103 between the City and the United States of America.

2.03: In the event the United States of America shall cease to operate Texarkana Reservoir, City will endeavor to continue to operate said Reservoir under contract with the United States of America as provided in Contract Numbered DACW 29-68-A-0103 and as may be permitted by law, in which event the parties hereto will negotiate the terms, conditions and rates of payment for the continuation of the primary term for the unexpired portion thereof, if any.

2.04: The term of this 1977 Agreement and the obligations of City and Company hereunder are specifically made subject to the successful issuance and sale of revenue bonds contemplated by the provisions of Article Six of this 1977 Agreement.

ARTICLE THREE

COMPANY OPTIONS TO EXTEND TERM:

3.01: Exercise by Company of its options to extend the term of the 1971 Agreement pursuant to the provisions and conditions contained in Article Two thereof shall operate automatically to extend the term of this 1977 Agreement to the same resulting expiration date or dates.

ARTICLE FOUR

WATER FACILITIES EXPANSION PROJECT:

4.01: City covenants and agrees that upon the issuance and sale of the Series 1977 Bonds and, if necessary, completion bonds, contemplated

under Article Six of this Agreement, it will with due diligence prosecute to completion the acquisition and construction of the Water Facilities Expansion Project pursuant to the terms of this Agreement.

4.02: All construction, fabrication, materials, work and other services in connection with providing the Water Facilities Expansion Project shall conform to plans and specifications approved by City and, where necessary, by the Contracting Officer of the United States of America under Contracts Numbered DACW 29-68-A-0103 and DACW 29-69-C-0019, the Expanded System to have capacities and capabilities to (1) withdraw from Wright Patman Lake 60.3 million gallons of raw water per day; (2) deliver to City's treatment plant a supply of 47 million gallons of water per day through the existing 42-inch raw water transmission line; (3) provide the necessary treatment so as to produce 47 million gallons of potable water per day out of which 37 million gallons per day will be available for Company's industrial purposes and 10 million gallons per day will be available for municipal customers and members of the general public within the Expanded System's service area.

4.03: Delivery of all other water contracted for by Company under the 1971 Agreement (therein referred to as "downstream flow") shall continue to be released through the outlet facilities of Texarkana Dam into the Sulphur River for conveyance by the bed and banks of that river to a point downstream designated in the permit issued to Company by the Texas Water Quality Control Board, or its successor having similar jurisdiction. In the accomplishment of its responsibilities and in pursuance of its rights under this Agreement, City shall have such ingress and egress over Company property as may reasonably be necessary, and if circumstances indicate the advisability thereof, Company will, by separate instrument or instruments, provide City without cost an easement or easements across Company property. City shall continue to have free access to come upon Company property at all reasonable times for the purpose of observing the condition and operation of the water treatment plant. All real property required in providing the Expanded System shall be conveyed by Company to City without cost to City, and any site required shall be conveyed to City as needed during the course of construction.

4.04: Consistent with the 1971 Agreement, the Water Withdrawal and Delivery Facilities and the Treated Water Distribution System will continue to be located on sites acquired or to be acquired by City.

4.05: Company reaffirms its understanding that the Expanded System herein contemplated will constitute a municipally-owned public utility as authorized by Articles 1108 and 1111c, Texas Civil Statutes; that as permittee under Permit No. 1563b granted City by the Texas Water Rights Commission and under the applicable laws of Texas, City is and will continue to be obligated to furnish water, if available, on reasonable demand, to members of the general public in the area which may be served by the Expanded System, including the Cities of Atlanta, Queen City and Domino, Cass County, Texas, who each have heretofore contracted with the City of Texarkana for a supply of treated water. As indicated in Section 4.02 above the Expanded System will have a capacity for delivery to the three municipalities aforementioned and to other possible customers 10 million gallons of treated water per day, thus resulting in an increase of 3.2 million gallons of treated water per day which will be available from City's treatment plant on reasonable demand for furnishing treated water to members of the general public within the service area of the Expanded System over the 6.8 million gallons per day which are presently available for such purposes from the Existing System.

4.06: Subject only to Company's rights and obligations as set forth under Article Five hereof, and notwithstanding payment and discharge of

City's bonds issued for acquisition and construction of the Expanded System through moneys received or to be received by City from Company under the 1971 Agreement and this 1977 Agreement for application to the payment and discharge of such bonds, City shall continue to have complete ownership of the Expanded System and to exercise full supervisory control thereof with power to issue all orders, rules and regulations it deems advisable to any persons in occupancy of any part of said Expanded System.

4.07: Company agrees that if for any reason whatsoever it shall be unable to operate the water treatment plant so as to provide City with 10 million gallons of treated water per day, and if all or any part of that amount is desired by it for supplying municipalities or others in the service area, City shall have the right to provide all necessary means to insure the continued operation and maintenance of the water treatment plant in such manner as will afford the means of supplying its requirements for treated water therefrom.

ARTICLE FIVE

MAINTENANCE OF WATER FACILITIES:

5.01: Acting for and on behalf of City, Company shall continue to be responsible for the operation and maintenance of the water treatment plant as improved and enlarged by the Water Facilities Expansion Project at its sole cost and expense and as provided in the 1971 Agreement, and Company agrees to operate and maintain the expanded water treatment plant in a first-class working condition and in compliance with all laws, rules and regulations of the United States of America and the State of Texas, as well as any State or Federal regulatory agency having authority in that respect. Replacements and betterments to the Expanded System shall be provided for solely out of the Contingency Fund referred to in Section 11.03 hereof.

5.02: City shall continue to have and assume full responsibility for the operation and maintenance of the intake structures, pumps, structures housing the pumps and pipelines (the "Water Withdrawal and Delivery Facilities") for the delivery of raw water from Lake Wright Patman to the water treatment plant subject to the terms of this Agreement and shall continue to take reasonable measures in the operation and maintenance of same to prevent either an interruption or curtailment of service, or a substantial diminution of Company's water supply by reason of mechanical or equipment failure or insufficiency, or by reason of any interference with, or impairment of, its Water Withdrawal and Delivery Facilities; and should any such interruption, curtailment, diminution or impairment develop, City will take every prompt and reasonable means of repairing or rectifying the same, and of restoring such Water Withdrawal and Delivery Facilities to a condition fully adequate to meet the quantity specifications of this Agreement; provided, however, City shall have the right to interrupt or curtail such service where reasonably necessary for repairs, maintenance, and for cleaning of its lines to prevent deterioration in quantity and/or quality of water and to maintain minimum pumping costs, such interruption or curtailment to be on reasonable notice to Company. Replacements and betterments of Water Withdrawal and Delivery Facilities, other than alterations provided for an increased pumping capacity which may be installed by City to service its future additional customers, shall be paid out of the Contingency Fund as provided in Section 11.03. It is specifically understood that installation, operation, maintenance, replacements and betterments of the Water Withdrawal and Delivery Facilities by City to serve City's future additional customers shall be at City's sole expense.

5.03: City shall continue to have and assume full responsibility for the operation and maintenance of the Treated Water Distribution System as well as replacements and betterments thereto, for the purpose of delivering treated water to its present and future customers to whom water may be made available from the Expanded System. Replacements and betterments of

the Treated Water Distribution System shall, however, be paid out of the Contingency Fund as provided in Section 11.03, all other expenses of operation and maintenance to be paid by City from operating revenues of such System.

ARTICLE SIX

REVENUE BONDS:

6.01: Upon execution of this contract City shall proceed under applicable law with the issuance of its revenue bonds in the amount of not to exceed $2,900,000 as mutually agreed upon at the time of bond issuance for the purpose of providing funds with which to pay and discharge all costs and expenses incurred in and incident to acquiring and constructing the Water Facilities Expansion Project, including administration, legal, financing and other technical services and for reimbursement of such sums as Company may have deposited in the "City of Texarkana, Texas, Water Improvement Interim Construction Account" pursuant to the terms of the Interim Contract (Water). The terms and specifications of such bonds shall be prescribed and set forth in the bond ordinance relating thereto adopted by the City Council. The bond ordinance shall be prepared in such manner as will afford an option of redemption prior to the stated maturities. By its approval and execution hereof Company acknowledges that contractual arrangements will result between City and purchasers of the bonds by virtue of the terms and conditions of the bond ordinance, and Company recognizes that certain proceeds of this contract will be pledged by City in support of such bonds, and that accordingly the holders thereof shall possess a beneficial interest herein to that extent. In consideration of all this, City agrees that all terms, conditions and covenants of the bond ordinance which involve Company responsibilities shall have Company approval prior to adoption.

6.02: City shall, to the extent requested by Company, and upon payment by Company of such amounts as are necessary for the purpose, exercise its rights under the provisions of the City's bond ordinance which relate to optional redemption of bonds prior to their stated maturity. Upon any such redemption further payments by Company of such sums as are specified under Section 11.01 hereof for requirements of unredeemed bonds shall be reduced proportionately. It is provided, however, that any such optional redemption shall not relieve Company of its continuing obligation to pay all remaining charges specified herein and under the provisions of the bond ordinance including (i) those prescribed for mandatory sinking fund redemption payments and (ii) those which shall be required for extraordinary mandatory redemption of all then outstanding bonds as a result of a final determination that interest payable on the bonds is includable in gross income of any holder other than a "substantial user" or a "related person."

6.03: It is agreed that should the Project cost exceed the amount of City revenue bonds to be issued and paid for pursuant to the terms of this Agreement, City shall issue and sell parity completion bonds in the required amounts and the payments herein prescribed to be made by Company shall be increased accordingly without further modification of this contract to provide all completion bond requirements including an increased reserve to be maintained in an amount of not less than the average annual requirements of all bonds then to be outstanding and for all costs and expenses of every nature incurred in connection with the authorization, sale and delivery of such completion bonds.

6.04: Those proceeds of the revenue bonds derived for the purpose of acquiring and constructing the Water Facilities Expansion Project shall be deposited in a Construction Fund and administered pursuant to the terms of the City's bond ordinance. Should there be any balance in the Construction Fund after all Project costs are paid, said balance shall be placed in the

Bond Debt Service Fund and applied on reduction of the payments required of Company under the provisions of Section 11.01 hereof.

6.05: Company shall make all payments to City constituting demand charges under Section 11.01 for the annual debt service requirements of the City's revenue bonds supported by this contract regardless of any default or failure of any nature on the part of either party under this contract, and regardless of any failure or default of any nature on the part of any agency upon which City must rely for power, authority or its ability to provide water hereunder.

6.06: Each payment of the charges herein provided to be made for discharging the bond indebtedness shall be immediately deposited as required by the bond ordinance and if any funds in excess of current debt service requirements are held on deposit in the Debt Service Fund at the time payment of any charges therefor is due, such payment shall be reduced by the amount of the funds so held on deposit, to the benefit of the Company. The Company shall have the right to prepay all or a portion of any charges at any time and shall be obligated to do so timely if and to the extent the Company requests redemption of any of the bonds prior to their stated maturity. Each charge for payment of bond indebtedness, together with funds held on deposit in the Debt Service Fund, shall at all times be sufficient to pay all principal of, premium, if any, interest on the bonds, and fees of paying agents for the bonds when due. Any prepayment by Company shall not relieve it of its liability for each remaining bond payment charge.

6.07: Company hereby agrees that a Debt Service Reserve Fund shall be set aside from the proceeds of the sale of the bonds and that it is to be invested in accordance with the provisions of the bond ordinance and that so long as said fund is maintained at the minimum amount to be provided therefor, the income from investments shall be deposited in the Debt Service Fund and applied on reduction of the payments required of Company under the provisions of Section 11.01 hereof. Company further agrees that should, for any reason, the Debt Service Reserve Fund be depleted in any amount that cannot be restored from the income of the investment thereof, it shall be restored to the established minimum by equal monthly payments to be made by Company extending over a period not to exceed twelve (12) months, such to be billed Company pursuant to arrangements for payment of other charges by Company as herein set forth.

ARTICLE SEVEN

QUANTITY OF WATER:

7.01: Consistent with the provisions of Article Six of the 1971 Agreement, City covenants and agrees to use all reasonable means to deliver to the water treatment plant by means of the Water Withdrawal and Delivery Facilities described in Article Four, and as permitted under City's Permit numbered 1563b referred to above, an uninterrupted supply of water, not to exceed a peak demand per operating day of the quantities hereinafter set forth, or such demand as may be in effect hereunder by reason of an exercise of Company's option to extend the term of this Agreement as provided in Article Three:

(a) Eighty-four million (84,000,000) gallons per operating day from and after the beginning date of the term of this Agreement, until the effective date of water withdrawal as provided in Contract Numbered DACW 29-68-A-0103 between City and the United States of America; and

(b) The amount of one hundred five million four hundred thousand (105,400,000) gallons per operating day from and after the effective date of water withdrawal under said Contract Numbered DACW 29-68-A-0103, during the term or any extended term of this Agreement.

7.02: Company shall have the option to have such quantity of water in excess of the amount which will provide the 10 million gallons per day for City's Treated Water Distribution System or Systems, to be delivered to Company through City's treatment plant, or to be delivered as downstream flow by the bed and banks of Sulphur River to the point referred to in Article Three of the 1971 Agreement, it being provided, however, that the amount of water to be elected by the Company to be delivered to it through City's water treatment plant shall not be of a quantity which together with the 10 million gallons per day for City's Treated Water Distribution System shall in the aggregate exceed at any time the stated maximum pumping capacity of the Water Withdrawal and Delivery Facilities to supply to City's treatment plant a water supply of 47 million gallons of water per day, nor shall such Company's election for downstream flow exceed the amount permitted to be released through the outlet facilities of Texarkana Dam as shall be determined by the Corps of Engineers, United States Army, or their successors having jurisdiction over the operation of Texarkana Reservoir; it being further provided that the aggregate of water to be delivered under the terms of this contract shall not exceed 29 billion, 400 million gallons per calendar year of this Agreement during the interim Government contract period (DACW 29-69-C-0019) and 36 billion, 890 million gallons per calendar year during the permanent Government contract period (DACW 29-68-A-0103).

7.03: It is expressly provided, however, that the right of Company to utilize water to be delivered by City under this Agreement in quantities not to exceed the maximum quantities per day as hereinabove set forth are not cumulative, and failure of Company to utilize the maximum allowable quantity for any given day shall not increase the allowable quantity for any succeeding day, day being defined herein as the twenty-four hour period beginning 12.01 a.m. and ending at midnight of such calendar day.

7.04: The allocation of water between the water treatment plant and as downstream flow presently elected by Company shall continue until altered by Company upon written notice delivered to the agent of the City as shall be designated in writing from time to time by City for the purposes of this Agreement, such notice to be delivered within a reasonable time prior to the requested alteration of allocation.

7.05: It is provided that Company shall have no contracted obligation imposed by this Agreement as to the number of its mill operating days per year, nor as to any minimum quantity of water to be delivered to it per operating day by City's water facilities above described.

7.06: "Operating day" as used in this Agreement means any calendar day during which Company receives delivery of any water under this Agreement from City's facilities or as downstream flow.

ARTICLE EIGHT

ADDITIONAL QUANTITY OPTION:

8.01: As provided in the 1971 Agreement and now reaffirmed under this 1977 Agreement, in the event City shall obtain during the term or any

extended term of this Agreement the right to utilize storage space in Texarkana Reservoir for municipal and industrial water supply in addition to that now provided under Contract Numbered DACW 29-69-C-0019 and Contract Numbered DACW 29-68-A-0103 by reason of amendments or supplements to such respective contracts or under any successor contract or contracts negotiated in lieu thereof, and the City shall have the right under contracts between City and the United States of America and permits issued to it by the Texas Water Rights Commission or its successors or other agency having jurisdiction thereof, to permit the industrial use of any part of such additional industrial water and City shall offer the same for such use, the Company is granted the first right to purchase from City the portion thereof so offered for industrial use upon the terms, conditions and prices so offered by City an additional quantity of water as shall equal 86.1326 per cent (120,000/139,320) of such additional industrial water so offered, but in no event shall the additional purchases by Company under the terms of this Agreement, under any one or more offerings, be in excess of the total of 30,000,000 gallons per day.

8.02: Notice of such offer shall be given by City to Company as provided for other notices herein, it being provided the Company shall exercise its right of purchase of such additional quantity of water or any stated part thereof in the manner and within the time as shall be specified in such offering, and failure to exercise Company's option herein granted in the manner and within the time contained in such offering shall constitute a forfeiture of its right thereto.

ARTICLE NINE

METERING:

9.01: As provided in the 1971 Agreement and now reaffirmed under this 1977 Agreement, City shall install devices to measure and record daily by means of recognized and commercially acceptable metering equipment the quantity of water delivered to City's water treatment plant, to Company, to City's Treated Water Distribution System, to City's municipal or other customers, as well as such equipment required under paragraphs 9.04 and 9.05 of this Article, statements of which shall be furnished to Company as hereinafter provided in Article Twelve of this Agreement.

9.02: Cost of installation of such meters and equipment shall be included in Project cost. Company shall have access to such metering equipment at reasonable times for inspection and examination, but the reading, calibration, and adjustment thereof shall be done only by employees or agents of City. All readings and records of metering will be entered upon proper books of record by City. City shall periodically inspect the calibration of its meters and shall make such adjustments as found to be necessary; provided, such inspections shall be made at such times as shall be required by any regulatory agency having jurisdiction thereof. Company, at its option, may have a representative present at times such meters are inspected, calibrated, or adjusted.

9.03: If, upon any test, the percentage of inaccuracy of any meter is found to be in excess of two per cent (2%), registration thereof shall be corrected for a period of time extending back to the time when such inaccuracy began, if such time is ascertainable, and if such time is not ascertainable, then for a period extending back one-half (1/2) of the time elapsed since the date of the last calibration, but in no event further back than a period of six (6) months. If, for any reason, any meters are out of

service or out of repair so that the amount of water cannot be ascertained or computed from a reading thereof, the amount of water during the period such meters are out of service or out of repair shall be estimated and agreed upon by the parties hereto on the basis of the best data available.

9.04: Metering of downstream flow as provided in this Agreement shall be in accordance with the regulations of the Corps of Engineers of the United States Army governing the Contracts between City and the United States of America as hereinabove described as approved by the Texas Water Rights Commission, or its successor.

9.05: City shall install and maintain such continuous reservoir content and lake level measuring station as required by any permit issued to City by Texas Water Rights Commission or its successor under which water is delivered under this contract.

ARTICLE TEN

QUALITY OF WATER:

10.01: As provided in the 1971 Agreement and now reaffirmed under this 1977 Agreement, City agrees that all water delivered to City's water treatment plant shall be, and Company agrees that such water shall be, the raw reservoir water from Texarkana Reservoir. It is contemplated by this Agreement that the quality of such water shall be consistent with the water quality requirements applicable to Texarkana Reservoir as shall be determined from time to time by the Texas Water Quality Board, or such other successor agency of the State of Texas having jurisdiction thereof.

10.02: If at any time during the term or extended term of this Agreement Company shall determine that the quality of said water is changing or deteriorating, or has changed or deteriorated, to an extent or degree that said quality has fallen, or may reasonably be expected to fall, below the water quality requirements determined by such Board or successor agency, and shall notify City of such fact in writing, City covenants and agrees that, unless such change or deterioration is caused by or due to the negligence or willful and intentional act or acts of Company or its permitted assigns hereunder, City will forthwith and with the utmost diligence take whatever action as shall be available to it and as may be necessary, advisable or expedient to cause such Board or any other governmental agency, state or federal, that may be lawfully authorized to act in such matters, to correct and eliminate the cause or source of such change and deterioration, and to restore such water to a quality equal to, or better than, the water quality requirements determined by the Texas Water Quality Board, or other successor agency of the State of Texas having jurisdiction thereof; it being expressly provided that in any such event Company shall not be relieved of its obligations to make such payments as are specified in Article Eleven.

ARTICLE ELEVEN

WATER RATES AND CHARGES:

11.01: Company reaffirms its obligations to pay the demand charges provided for in Article Ten a) of the 1971 Agreement. Company covenants and agrees however as a separate and independent covenant that in consideration of City's undertakings pursuant to this 1977 Agreement, regardless of the actual quantity or quality of water received by it from the Expanded System during the primary or any extended term of this 1977 Agreement, and so long as there remain outstanding any principal or interest

pertaining to City's water revenue bonds issued and sold under the provisions of Article Six hereof, in addition to all demand charges for which it is obligated under the 1971 Agreement Company shall pay to City such sums of money as are required under the terms of the City's ordinance authorizing the Series 1977 Bonds as are necessary to provide in a timely manner all payments prescribed by said ordinance; provided that any funds on hand in the Debt Service Fund from excess Construction Funds or otherwise may, at Company's option, be applied in lieu of the aforementioned Company payment to the extent of such available funds. With each such payment there shall be included all such charges as may be imposed on City with relation to the payment of said respective installments of principal or interest including those of the paying agent or agents named in the bond ordinance.

11.02: Company reaffirms its obligations to pay the charges for the purposes and in the manner provided for in Article Ten b)1) of the 1971 Agreement so as to include the Expanded System. Company covenants and agrees, however, in further consideration of City's undertakings pursuant to this 1977 Agreement that in addition to all charges for which it is obligated under the 1971 Agreement, it will pay the sum of $1,575 per month to cover City's costs incident to its responsibilities under this Agreement including, without limitation, supervision, engineering, accounting, auditing, legal and other services necessary for proper administration of City's responsibilities hereunder and the revenue bonds herein contemplated; also City's continuing maintenance of water rights in Lake Wright Patman and its interests in further water resource development for assurance of an adequate supply of water to serve the public interest in City's service area. City agrees to maintain records of account pertaining to this Agreement and the operation and maintenance of the Water Withdrawal and Delivery Facilities. City further covenants that it will continue to operate those facilities as expanded pursuant to this Agreement as economically as is consistent with good operational practices.

11.03: Company recognizes that a Contingency Fund for extraordinary or emergency repairs or restoration or for improvements and betterments of the Existing System has been provided in the sum of Two Hundred Thousand Dollars ($200,000) out of proceeds of the sale of the Series 1971 Bonds and agrees that said Fund shall be increased to the sum of Two Hundred Fifty Thousand Dollars ($250,000) from the proceeds of the sale of the Series 1977 Bonds. Company reaffirms its agreement that should it be necessary to employ the Contingency Fund for such extraordinary or emergency repairs or restoration, or for replacements, improvements or betterments to the Expanded System (not including facilities for additional pumping capacity in the Water Withdrawal and Delivery Facilities to serve City's municipal customers therefrom in addition to Atlanta, Domino and Queen City) to such extent as to deplete such Fund below Two Hundred Fifty Thousand Dollars ($250,000), Company shall restore such Fund to that amount by equal monthly payments over a period of not to exceed twelve (12) months from the time of the deficit and that should the repairs, replacements or betterments require funds in excess of the amount at the time on hand in the Contingency Fund, Company shall provide all excess sums. It is agreed and understood that City shall not employ the Contingency Fund for major expenditures without first procuring the written advice and recommendation of an independent consulting engineer agreeable to Company with regard to the necessity and advisability thereof, nor shall the Contingency Fund be used for repairs, replacements or betterments of any facilities for additional pumping capacity installed in the Water Withdrawal and Delivery Facilities to serve City's additional municipal customers therefrom.

11.04: City reaffirms the provisions of Article 10 e) of the 1971 Agreement directing the priorities and methods for disposition of the gross income received by City from the sale of treated water through the Treated Water Distribution System, recognizing that such are pertinent only to the objectives established therefor under said 1971 Agreement.

ARTICLE TWELVE

TIME AND PLACE OF PAYMENT:

12.01: During the term or any extended term of this Agreement and except as otherwise provided in Section 11.01 (relating to payments for bond requirements), all payments to be made by Company shall be due and payable on the 20th day of each month after rendition of a statement therefor by City. City shall continue to provide Company, prior to the 10th day of each calendar month, a statement showing the items constituting the aggregate charges due and payable by Company under the 1971 Agreement, and as payments shall become due under this Agreement, such statement shall also include the items constituting charges under this Agreement. All payments shall continue to be made by Company to City at the office of the City Secretary of the City of Texarkana, Texas, in Texarkana, Bowie County, Texas. It is especially understood, however, the demand charges provided for in Article Eleven shall be made when due as therein indicated and without further notice or billing by City.

ARTICLE THIRTEEN

FORCE MAJEURE:

13.01: As recited in the 1971 Agreement and now reaffirmed in this Agreement, should the ability of City to comply with its several obligations hereunder or Company's ability to utilize or use the water contracted to Company hereunder, or Company's ability to operate the water treatment plant be prevented, impaired, curtailed or delayed by reason of fire, windstorm, strike, riot, civil commotion or act of God, or any other similar cause, or reason beyond the control of the parties so affected, it is understood and agreed that neither party shall be liable to the other for any direct or consequential damages caused by, resulting from, or attributable to such inability to perform, it being expressly provided, however, that this provision shall not relieve Company of its obligation to make payment of the charges under Article Eleven of this Agreement.

13.02: Subject only to the provisions of Article Eleven hereof relating to payments to be made by Company to City in any and all events, nothing in this Article is intended, nor shall it be construed as any impairment or waiver of any right or cause of action which either party might lawfully be entitled by reason of any loss or damage sustained by such party by reason of willful or intentional breach of a material provision of this Agreement or a wrongful refusal on the part of the other party to perform its several obligations hereunder.

ARTICLE FOURTEEN

WARRANTY:

14.01: As recited in the 1971 Agreement and now reaffirmed in this Agreement, the parties hereto stipulate that no representation or warranty has been made or undertaken by the City as to the quantity or quality of water which may be furnished to Company under this Agreement, under Contract Numbered DACW 29-69-C-0019 or Contract Numbered 29-68-A-0103 between

City and the United States of America, and amendments or supplements thereto, or any successor contract or contracts negotiated in lieu thereof, or that the same is suitable for any intended use by Company; provided, however, City will continue to undertake to use reasonable means to avoid any deterioration in the quality of water which may be utilized by the Company hereunder which may result from the direct acts of the City.

14.02: City's obligation to deliver water under this Agreement, both as to quantity and quality, is expressly made subject to any priority of rights set forth in Contract Numbered DACW 29-68-A-0103 or Contract Numbered DACW 29-69-C-0019 between City and the United States of America and any amendments or supplements thereto, or any successor contract or contracts negotiated in lieu thereof, as well as such priority set forth in any permits granted to City by agencies of the State of Texas having jurisdiction thereof.

ARTICLE FIFTEEN

RELEASE OF CLAIMS:

15.01: Except to the extent City's liabilities, if any, are within the coverage of public liability insurance and workmen's compensation insurance contemplated under Paragraph b) 1) of Article Ten of the 1971 Agreement, Company shall continue to hold and save City, including its officers, agencies and employees, harmless from liability of any nature or kind for or on account of any claim for damages which may be filed or asserted as a result of the storage in Texarkana Reservoir or withdrawal or release of water from Texarkana Reservoir made or ordered by the City under Contracts Numbered DACW 29-69-C-0019 and DACW 29-68-A-0103, and any amendments or supplements thereto, or any successor contract or contracts negotiated in lieu thereof, in the performance of this contract between City and Company, as well as on account of the delivery of water to the water treatment plant as defined herein and the operation and maintenance by Company of the water treatment plant as defined in Article Four.

15.02: Company agrees that in any and all events it will at all times indemnify and hold harmless the City against any and all claims, losses, costs, damages and liabilities of whatsoever nature arising directly or indirectly out of or related to design, contracts for construction, engineering, legal and financing and acquisition and operation of such facilities; those arising out of or related to any claims or expenses that result from any acts or omissions of the City, or its officers, agents, employees, or any other party acting for or on Company's behalf in connection with the prosecution of any work or other activities relating to the Project and those arising directly or indirectly from excise levies and/or taxes of any kind directly or indirectly imposed by any taxing authority upon any property or transaction involved in the financing, construction or operation of the facilities. As used herein the term "claims" shall include all claims, lawsuits, causes of actions or other legal actions and proceedings of whatsoever nature brought against the City or to which the City is a party. The City will not be liable to the Company for, and the Company hereby releases the City from all liability to Company for, bodily or personal injury or death of any person, or damages to or destruction of all or any part or parts of any property owned or claimed by Company that directly or indirectly result from, arise out of or relate to the design, construction, operation, use, occupancy, maintenance or ownership of the facilities or any part thereof.

15.03: It is further recognized by Company that no payment by City of any obligation assumed by, or imposed upon, City by virtue of this

Agreement shall be from funds raised, or to be raised, by taxation by City, and Company shall not have the right to demand payment from City from any such funds. City's obligations under this Agreement or arising herefrom, whether to Company or otherwise, shall never be construed to be a debt of City of such kind as to require it to levy and collect a tax to discharge such obligations.

ARTICLE SIXTEEN

DEFAULT:

16.01: In the event of breach or default by the Company of any of its obligations under the terms of this Agreement, City shall give Company notice of such breach or default, and except as otherwise provided in this Agreement, Company shall have sixty (60) days thereafter within which to cure and rectify such breach or default. Upon failure of Company to so cure or rectify such breach or default, City, at its option, may declare Company's rights to receive and utilize water contracted for under this Agreement forfeited; provided, however, forfeiture of such right shall not relieve Company of any of its obligations under this Agreement.

ARTICLE SEVENTEEN

REDUCTION IN COMPANY REQUIREMENTS:

17.01: The parties hereby reaffirm their understandings set forth in Article Sixteen of their 1971 Agreement that Company requirements for the quantity of water permitted to Company by this Agreement may be decreased from time to time due to technological improvements in processes, techniques, equipment or similar causes, and in such event Company shall have the right at any time during the primary or any extended term of this Agreement, to give to City written notice of the diminished quantity required by Company and any quantity of water stated in millions of gallons per day the Company desires to release to City for sale or other disposition by City, stating therein the date upon which said release may be effective. Upon receipt of such notice City will make diligent effort to sell such surplus water to other parties, and City shall, after receipt of such notice, have a continuing option during the remainder of the primary term or any extended term of this Agreement, to accept such release at such time as shall be stated by City in written notice to the Company, and upon the exercise of such option, the amount of payments due by Company under this Agreement shall be reduced by the proportion of such payments determined by the ratio of the quantity of water released to the maximum quantity of water contracted to Company under this Agreement at the effective date of such release where applicable. It is expressly provided, however, that no reduction or waiver of payment by Company under this Article shall be effective until the effective date stated by City upon City's exercise of the option provided to it herein, provided, however, that nothing herein contained shall relieve Company from the obligation to pay that portion of the demand charge specified for payment of principal or interest on the bonds issued under the provisions of Article Six.

17.02: Failure of Company to take delivery of water from the water treatment plant hereinabove defined for any consecutive five (5) years during the term or any extended term of this Agreement shall automatically give to City the continuing option during the remainder of the primary or any extended term of this Agreement to sell or otherwise dispose of the water herein contracted to Company, it being expressly provided,

however, that nothing herein contained shall relieve Company from the obligation to pay that portion of the demand charge specified for payment of principal or interest on the bonds issued under the provisions of Article Six.

ARTICLE EIGHTEEN

EXCLUSIVE SUPPLY:

18.01: Company hereby reaffirms its agreements that during the primary term or any extended term of this Agreement, Company agrees that it will purchase from City all of Company's requirements of industrial or commercial water for use in the vicinity of Texarkana Reservoir, save and except Company shall have the right to utilize from its own facilities, or to acquire from any other source, water necessary for special purposes as may be required in its operation for drinking water, boilers and other similar special uses:

18.02: During such time as City may be unable to supply from Texarkana Reservoir the quantity of water contracted for under the 1971 Agreement due to decrease in City's available supply from such Reservoir, Company shall have the right to obtain its requirements of industrial or commercial water from any other sources available to Company.

ARTICLE NINETEEN

ASSIGNMENT BY COMPANY:

19.01: City reaffirms its agreement that all water contracted to Company under the 1971 Agreement shall be exclusively used by Company for the operations of a pulp and paper plant and manufacturing facility of Company, and in any other related commercial or industrial operation of Company in the vicinity of Texarkana Reservoir, but no such water or right thereto shall be assigned or resold directly or indirectly by Company to any others except upon the written consent of City. It is provided, however, that in the furtherance of operation of Company's plant, Company may use or sell any such water in or to any plant or plants leased to or operated by Company or in or to any plant or plants in which Company shall own an interest, or in or to plants leased to or operated by plant or plants in which Company shall own an interest and which are located within six (6) miles of the point of diversion as hereinabove referred to at Texarkana Reservoir, and any such use or sale shall not be considered a prohibited assignment or resale under this Article. Company may likewise use or sell treated water allocated to Company and originating under the terms of this Agreement to any other plant or plants located within six (6) miles of the point of diversion as hereinabove referred to engaged in the supplying, production or processing of supplies or products used by Company in its own plant, or which are engaged in manufacturing, producing or processing other products utilizing any products or by-product of Company's plant and any such use or sale of such treated water shall not be considered a prohibited assignment or resale under this Article.

19.02: No assignment, sale or permitted use by others under this Article shall relieve Company from any payments or obligations to be performed by Company hereunder unless expressly released in writing by City.

19.03: Notwithstanding any provision contained in this Article, Company's use of water shall in no event exceed the permitted use described in Company's Permit CP-57, or any amendments or supplements thereto.

ARTICLE TWENTY

SUCCESSION OF INTEREST:

20.01: The parties reaffirm that the provisions of this Agreement shall inure to the benefit of, and shall be binding upon, the successors and permitted assigns of City and Company, but no such succession or assignment shall relieve either City or Company of their respective responsibilities hereunder without the express written consent of the other party hereto, and provided further that so long as there remains outstanding and unpaid any of the water revenue bonds issued or to be issued to finance the construction of the water facilities under this Agreement, no such succession or assignment shall be valid or binding without the prior written consent of the holders of at least seventy-five per cent (75%) in value of the then outstanding water revenue bonds.

20.02: The obligation of City for delivery of water to Company, Company's contractual right thereto, and Company's obligations hereunder shall be continuous as herein provided and shall not be terminated in the event or events contracts or agreements are voluntarily negotiated between City and the United States of America to succeed or supplant Contract Numbered DACW 29-68-A-0103 and Contract Numbered DACW 29-69-C-0019, or either of them, under which the United States continues to operate Texarkana Reservoir, during the primary or any extended term of this Agreement.

ARTICLE TWENTY-ONE

CONTRACT CONSTRUCTION:

21.01: The provisions of this contract shall be construed under and according to the laws of the State of Texas, and the performance hereunder and all rights herein contracted to either party shall be subject to all of the rules, regulations and laws applicable thereto passed or promulgated under the authority of the United States of America governing Texarkana Reservoir, as well as the rules, regulations and laws of the State of Texas, or any other governmental, administrative or regulatory agency having lawful jurisdiction over the withdrawal from or use of water therein.

ARTICLE TWENTY-TWO

MODIFICATION:

22.01: Modification of this Agreement, except as otherwise provided herein, may be requested by either party upon the giving of ninety (90) days' written notice stating the requested changes or modifications requested and to be considered, at which time bona fide negotiations shall be undertaken as to the modifications or changes submitted. It is recognized, however, that except as otherwise provided herein, this contract may not be changed or modified except with the written consent of City and Company by written amendment or supplement to this Agreement, and no change or modification of this Agreement may be made which will affect adversely or cause a violation of the provisions of the City's ordinance authorizing the issuance of its bonds referred to in Article Six hereof.

ARTICLE TWENTY-THREE

COMPANY GUARANTEE AGREEMENT:

23.01: Company agrees that upon the execution of this contract and prior to the time the City's revenue bonds herein referred to shall be offered for sale it will enter into a guarantee agreement with such bank or trust company as shall be designated paying agent and trustee under the provisions of City's bond ordinance whereby it will unconditionally and irrevocably guarantee to such trustee for the benefit of the holders from time to time of the bonds and interest coupons pertaining thereto (a) the full and prompt payment of the principal of and premium, if any, of each of the City's revenue bonds, issued under and supported by this contract, when and as the same shall become due, whether at the stated maturity thereof, by call for redemption or otherwise, and (b) the full and prompt payment of interest on each bond when and as same shall become due.

ARTICLE TWENTY-FOUR

INTERIM CONTRACT IN FORCE:

24.01: This contract is that anticipated by the parties in their "Interim Contract (Water)" executed as of the 9th day of February, 1976. Said Interim Contract shall remain in force and effect until such time as the City may have successfully issued and sold its revenue bonds pursuant to this contract and is in possession of the proceeds of such bonds.

ARTICLE TWENTY-FIVE

NOTICES:

25.01: Unless and until either of the parties hereto is notified to the contrary in writing, any notices required by the provisions of this Agreement shall be deemed effectively served, delivered and received if mailed by registered or certified mail with postage prepaid as follows:

(a) To City:

The City Manager
The City of Texarkana, Texas
Texas Municipal Building
Texarkana, Texas 75501

(b) To Company:

International Paper Company
P. O. Box 16807
Mobile, Alabama 36616

and at the

General Office of Company's Texarkana Plant -

(P. O. Box 870
Texarkana, Texas 75501)

IN WITNESS WHEREOF, City and Company have caused these presents to be signed and attested by their duly authorized officers, and the respective official seals to be hereunto affixed, in duplicate original counterparts, as of the day and year first hereinabove set forth.

INTERNATIONAL PAPER COMPANY

By _____
Executive Vice President

ATTEST:

_____
Secretary

(Seal)

CITY OF TEXARKANA, TEXAS

By _____
City Manager

ATTEST:

_____
City Secretary, City of Texarkana, Texas

APPROVED AS TO FORM:

_____
City Attorney, City of Texarkana, Texas

(Seal)

RENEWAL NUMBER ONE AND ADDENDUM TO WATER SUPPLY CONTRACT AND WATER FACILITIES EXPANSION CONTRACTS BETWEEN THE CITY OF TEXARKANA, TEXAS AND INTERNATIONAL PAPER COMPANY

THIS RENEWAL NUMBER ONE AND ADDENDUM TO WATER SUPPLY CONTRACT AND WATER FACILITIES AND EXPANSION CONTRACTS BETWEEN THE CITY OF TEXARKANA, TEXAS AND INTERNATIONAL PAPER COMPANY (this "Renewal and Addendum") is dated and effective as of February 13, 2007, and constitutes a part of that certain Water Supply Contract dated as of October 1, 1971, and that certain Water Facilities Expansion Contract dated as of August 1, 1977 (the "Contracts"), executed by and between The City of Texarkana, Texas (the "City") and International Paper Company, a New York corporation authorized to do business in the State of Texas (the "Company").

Whereas, the Company and the City entered into the Contracts to establish the respective rights and obligations with respect to, among other things, the treatment of raw water from the Wright Patman Lake and delivery of such water to the City as a source of drinking water for the City and the communities of Domino, Queen City and Atlanta; and

Whereas, new regulations that specify the maximum concentration of TTHM and HAA for drinking water, the parties have determined that additional treatment is necessary to meet these standards; and

Whereas, the parties disagree on the legal effect of the language in the Contracts with respect to the respective obligations to meet new treatment requirements for drinking water; and

Whereas, despite the differing points of view, the parties intend to proceed with design, construction and operation of a water treatment system without compromising their rights under the Contracts with respect to any future requirements, projects or expenditures;

Now, therefore, it is hereby acknowledged and agreed that the Contracts between the City of Texarkana, Texas and International Paper Company are hereby supplemented to add the following language thereto:

1. **Full Force & Effect.** All existing contracts are to continue to have full force and effect, provided that to the extent that there is any conflict or inconsistency between this Renewal and Addendum and any provision of the main body of the Contracts, the provisions of this Renewal and Addendum shall govern.

2. **Granulated Activated Carbon Water Treatment System.** The Company and the City shall cooperatively scope, design and solicit quotations for the construction of a granulated activated carbon upgrades to water treatment system that will treat and deliver up to 3 million gallons per day of water to meet current State of Texas MCL standards for TTHM and HAA5 (0.080 mg/l and 0.060 mg/l respectively promulgated under Texas Administrative Code Title 30 Part 1, Chapter 290, Subchapter F, Rule 290.113) ("System") (MCLs"). The Company shall have full responsibility for and shall pay all costs to design, engineer, build, and operate the System for and on behalf of the City who shall be owner of the System upon its completion, at which time the Company will provide an arrangement for the use of land upon which the System will be located. The Company will facilitate and oversee, in cooperation with City, the construction activities for the System on Company property with the overall

objective of supplying treated water that will meet the State MCLs no later than January 1, 2008, to which end parties agree exert their best efforts. Notwithstanding the above, neither party will be liable to other for any failure to meet this deadline. The Company shall have full responsibility to replace the System's granulated activated carbon water treatment media, and all other components, in accordance with good operating practices.

3. **Government Approvals.** Performance under this contract is contingent upon receipt of any necessary government approvals or permits to which end the parties agree to exert their best efforts.

4. **Water Rates.** Upon commissioning the System, the City shall increase the rate charged for water use to $1.40 per 1000 gallons which shall be adjusted annually in accordance with the Consumer Price Index (CPI-U, U.S. City Average, All Items (NSA) as published by U.S. Department of Labor or any such lesser amount as may be adjudicated by the TCEQ or its successor agencies. In the event a lesser amount is adjudicated, the City will make good faith efforts to seek a subsequent rate adjustment as circumstances allow. Proceeds will be disbursed in accordance with past practice established pursuant the Contracts.

5. **Certification.** The Company shall have full responsibility, and the City shall provide full support to the Company, for securing all necessary certifications, and permits for the System.

6. **Compliance.** The Company shall operate the system in accordance with good operating practices, however, if, as designed, the System fails to produce treated water that meets the MCLs referred to above or any new or modified drinking water standards, or in the event the Carbon System requires additional upgrades or equipment, other than those required for routine maintenance, the parties will meet to discuss possible projects to maintain compliance, provided however, notwithstanding any provision to the contrary, the Company shall continue to meet its obligations under the Contracts and the Company shall continue to be bound by all provisions of the Contracts except insofar as the parties' expressly and unequivocally agree in a signed writing separate and apart from this instrument.

7. **Term.** This Renewal Number One and Addendum shall hereby extend the terms and provisions set forth in the aforementioned Contracts and add the terms included in this Renewal Number One and Addendum to the Contracts. The Renewal and Addendum shall become effective on the date above stated and shall operate pursuant to the expiration provisions set forth in the Contracts and any extensions thereto as provided in the Contracts. The parties agree that the Contracts and this Renewal and Addendum will remain in full force and effect through and until at least December 31, 2026, at which point they will all expire unless renewed in accordance with the provisions of the Contracts.

8. **Legal Effect.** The content of this Addendum including the parties' commitments with respect to the Carbon System will have no interpretive effect with respect to the Contracts, including, but not limited to, the obligations to undertake any specific responsibility with respect to any new or additional equipment that may be required to meet new or modified drinking water requirements and the parties hereby reserve their rights to any all legal arguments with respect to the meaning and effect of the Contracts.

IN WITNESS THEREOF, City and Company have caused these presents to be signed and attested by their duly authorized officers, and the respective official seals to be hereunto affixed, in duplicate original counterparts, as of the day and year first hereinabove set forth.

INTERNATIONAL PAPER COMPANY

By: _____
Vice President

ATTEST:

_____
Assistant Secretary

(Seal)

CITY OF TEXARKANA, TEXAS

By: _____
City Manager

ATTEST:

_____
City Secretary, City of Texarkana, Texas

APPROVED AS TO FORM:

_____
City Attorney, City of Texarkana, Texas

ASSIGNMENT, ASSUMPTION AND CONSENT AGREEMENT

This is an Assignment, Assumption and Consent Agreement (this "Agreement") by and among: (i) **International Paper Company**, a New York corporation ("IP"), located at 6400 Poplar Avenue, Memphis, Tennessee 38119; (ii) **Graphic Packaging International, LLC**, a Delaware limited liability company ("Purchaser") located at 1500 Riveredge Parkway, Suite 100 Atlanta, GA 30328; and (iii) the City of Texarkana, Texas (the "City").

RECITALS

WHEREAS, IP and the City entered into the following agreements pertaining to an IP owned Mill located in Texarkana, Texas (the "Mill"):

1. Water Supply Contract dated October 11, 1971 (the "Supply Contract");
2. Water Facilities Expansion Contract dated October 26, 1976 (the "Expansion Contract"); and
3. Renewal Number One and Addendum to Supply Contract and Expansion Contract dated February 13, 2007;

These agreements are incorporated by reference (collectively, the "Texarkana Mill Water Agreements");

WHEREAS, on October 24, 2017, IP and Purchaser entered into a definitive agreement under which IP agreed to contribute its North American Consumer Packaging Business, including the Mill, to Purchaser (the "Transaction");

WHEREAS, IP may not assign its rights or obligations under the Texarkana Mill Water Agreements without the prior written consent of the City;

WHEREAS, effective with the consummation of the Transaction (the "Transfer Date"), Purchaser wishes to assume the rights and obligations of IP under the Texarkana Mill Water Agreements, IP desires to assign such rights and obligations to Purchaser and the City will consent to such assignment and assumption pursuant to the terms and conditions of this Agreement;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, the parties hereby agree as follows:

1. **Assignment by IP**. Upon the Transfer Date, IP shall assign, transfer, convey, and deliver to Purchaser all of its right, title and interest in, to and under the Texarkana Mill Water Agreements, however, IP shall remain liable for and bound by the terms and conditions of the Texarkana Mill Water Agreements but only with regard to those rights, title, obligations and interest between IP and City on or before the Transfer Date.

2. **Assumption by Purchaser**. Upon the Transfer Date, Purchaser shall (i) accept the assignment of all of IP's right, title and interest in, to and under the Texarkana Mill Water Agreements, and (ii) assume all of the obligations of IP pursuant to the Texarkana Mill Water Agreements until terminated and/or expired.

3. **Consent of the City**. The City, through its undersigned duly appointed agent, hereby consents to the assignment and assumption of the Texarkana Mill Water

Agreements in accordance with the terms of this Agreement. This consent shall in no event be deemed consent to any further assignment of the Texarkana Mill Water Agreements.

4. **Notices**. Notices related to this Agreement shall be provided as follows:

IP:

International Paper Company
6400 Poplar Avenue
Memphis, TN 38197
Attn: General Counsel

Purchaser:

Graphic Packaging International, LLC.
1500 Riveredge Parkway, Suite 100
Atlanta GA 30328
Attn: General Counsel

City:
Shirley Jaster
City Manager
220 Texas Boulevard
Texarkana, TX 75501

5. **Applicable Law**. This Agreement shall be governed by, and shall be construed and enforced in accordance with, the laws of the State of Texas, without regard to its conflicts of law provisions.

6. **Assignment**. This Agreement can only be assigned to the same extent allowed pursuant to the Texarkana Mill Water Agreements.

7. **Amendments**. This Agreement may only be modified or amended by a written instrument executed by all of the parties hereto.

8. **Binding Effect**. This Agreement shall be binding upon and shall inure to the benefit of the parties hereto, and their successors and permitted assigns.

(***Signature Page to Follow***)

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the date first set forth above but actually on the dates indicated below.

IP

International Paper Company

Signature: _____

By Patricia Wilczynski

Title: VPd BM Coated Paperboard & Foodservice

Date: 12/28/17

PURCHASER

Graphic Packaging International, LLC

Signature: _____

By Lauren S. Tashma

Title: SVP, General Counsel & Secretary

Date: 12-28-2017

CITY

City of Texarkana, Texas

Signature: Shirley Jasper

By Shirley Jasper

Title: City Manager

Date: 12-22-2017

RESOLUTION NO. 2017-133

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TEXARKANA, TEXAS, AUTHORIZING THE CITY MANAGER TO ENTER INTO AN AGREEMENT, APPROVED AS TO FORM BY THE CITY ATTORNEY, CONSENTING TO THE ASSIGNMENT OF TEXARKANA MILL WATER SUPPLY AGREEMENTS FROM INTERNATIONAL PAPER COMPANY TO GRAPHIC PACKAGING HOLDING COMPANY OR ITS AFFILIATES; AND ESTABLISHING AN EFFECTIVE DATE.

WHEREAS, the City of Texarkana, Texas, owns a water supply treatment and delivery system consisting of withdrawal, delivery, and treatment facilities ("the System") operated by International Paper Company ("IP"); and

WHEREAS, the City has entered into the following contracts with IP in connection with or related to the System: "Water Supply Contract" dated October 11, 1971; "Water Facilities Expansion Contract" dated October 26, 1976; and "Renewal Number One and Addendum To Supply Contract and Expansion Contract", dated February 13, 2007 (collectively "Texarkana Mill Water Supply Agreements"); and

WHEREAS, on October 24, 2017, IP signed a definitive agreement under which IP agreed to contribute its North America consumer packaging business, which includes the Texarkana Mill, to Graphic Packaging Holding Company (or its affiliates) in a transaction that is scheduled to close in early 2018; and

WHEREAS, IP has requested that the City consent to the assignment of the Texarkana Mill Water Supply Agreements to Graphic Packaging and, as of Closing, the City release IP from any and all responsibilities, payments, or obligations under the Texarkana Mill Water Supply Agreements arising after Closing ("the IP request"), with IP remaining responsible to the City for responsibilities, payments, or obligations under the Texarkana Mill Water Supply Agreements arising, accrued, or which may accrue prior to Closing; and

WHEREAS, after the IP assignment, Graphic Packaging will own and operate the Texarkana Mill and will wholly step into the shoes of IP with respect to all responsibilities, payments, and obligations due under the Texarkana Mill Water Supply Agreements as of and after Closing; and

WHEREAS, the City Council finds and determines that, in principle, the request of IP should be granted and that the City Manager should be authorized to enter into an agreement, approved as to form by the City Attorney, consenting to the IP request and the assignment of the Texarkana Mill Water Supply Agreements from IP to Graphic Packaging, and protecting the City's ownership and interests in the System.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF TEXARKANA, TEXAS:

SECTION 1: The City Council authorizes the City Manager to enter into an agreement, approved as to form by the City Attorney, consenting to the IP request and the assignment of the Texarkana Mill Water Supply Agreements from IP to Graphic Packaging Holding Company or its affiliates, and protecting the City's ownership and interests in the System.

SECTION 2: This Resolution shall be in full force and effect from and after its passage and approval.

PASSED AND APPROVED in Regular Council Session on this the **11th day of December, 2017.**

ATTEST:

JENNIFER EVANS, CITY SECRETARY

BOB BRUGGEMAN, MAYOR

6:14 p.m.

Water Purchase Contract

THIS contract for the sale and purchase of water is entered into and effective as of December 8, 2008 ("the Effective Date"), between the City of Texarkana, Texas, Texas City Hall, 220 Texas Boulevard, Texarkana, Texas 75501, hereinafter referred to as "Seller" and the City of Atlanta, Texas, P.O. Box 669, Atlanta, Texas 75551, hereinafter referred to as the "Purchaser".

WITNESSED:

WHEREAS, the Seller is fully empowered to enter into contracts with other cities for the purpose of selling water for municipal, domestic, industrial and other useful purposes permitted by law and upon such terms and for such time as the parties may agree; and

WHEREAS, the Seller owns a water treatment and supply system in Cass County, Texas (hereinafter referred to as the "System") capable of providing an adequate water supply for the foreseeable future to the Purchaser; and

WHEREAS, the Purchaser has a need for such water supply and desires to enter into a contractual arrangement with the Seller for water from said System.

NOW, THEREFORE, in consideration of the foregoing and the mutual agreements hereinafter set forth,

A. <u>The Seller agrees:</u>

1. To reserve capacity in the drinking water system so as to furnish the purchaser at the point of delivery hereinafter specified during the term of this contract or any renewal or extensions thereof, potable treated water as may be required by the Purchaser not to exceed 64,400,000 million gallons per month. Water shall be taken at a rate not to exceed 84,000 gallons per hour (gph) nor shall water exceed 2,110,000 gallons usage on any calendar day. Seller shall retain the right to control water supplied to Purchaser within the previously stated not to exceed quantities. Water delivered under this contract shall be of the same quality as that distributed by Seller to its other customers on this system. If in the future, it is agreed by both parties that if a

larger quantity of water is desired by the Purchaser, any improvements required shall be at the expense of the Purchaser or if such quantity of water is voluntarily available from another purchaser with reserved capacity in the drinking water system, then agreed upon capacity may be transferred to Purchaser upon completion of appropriate contract amendments that include but is not limited to changes in payment under Section B.I.a. below.

2. To provide treated surface water meeting all applicable Texas and Federal regulations. Except as provided in this section, Seller makes no warranty expressed or implied, regarding the quality or delivery pressure of the water, including the implied warranties of merchantability and fitness for a particular purpose. To the extent permitted by law, Purchaser hereby releases and discharges Seller from any and all fines, demands, judgements, liabilities or claims arising by reason of or in connection with the delivery of water which meets the requirements of this Section.

3. To allow the Purchaser to use the existing connections, with certain upgrades stated herein including backflow devices and Supervisory Control and Data Acquisition (SCADA) equipment, to Seller's system to deliver the quantities of water requested in this contract. Said connections, including all monitoring, control, transmission, metering, telemetry and attendant facilities are recognized as the property of the Seller, except all backflow prevention facilities shall remain the property and responsibility of the Purchaser. Purchaser specifically agrees to install at Purchaser's expense backflow prevention devices and telemetry equipment acceptable to Seller and meeting any applicable Texas Commission on Environmental Quality (TCEQ) rules and regulations.

4. Purchaser agrees that backflow devices to protect the Seller's system are a necessary part of the connection facilities and agrees to install, test and maintain such facilities as necessary and required by state or local codes or statutes, but in no case shall

maintenance and inspections be performed less than annually. Purchaser shall supply all records of such maintenance and inspections on an annual basis to Seller. Seller is hereby authorized to enter onto any of Purchaser's properties with prior notice and during normal business hours, whether held in fee simple or by easement, necessary to verify maintenance and inspection of backflow prevention. Purchaser agrees that during the term of the contract, should the existing backflow measures be inadequate to meet the State's standards, to bring the backflow measures up to the State's standards at Purchaser's sole expense. As an alternative to backflow prevention devices, the Purchaser may install an "air gap" system at the primary intake to separate the Seller's water supply from the Purchaser's water supply. Any "air gap" system installed by the Purchaser shall meet the approval of the Seller.

5. To furnish the Purchaser at the above address not later than the 15th day of the month following water usage, with an itemized statement of the amount of water furnished the Purchaser and the charges for such during the preceding month. The quantity of water for which Purchaser shall be billed shall be based upon the reading of the master meter of the Seller except under conditions set out in Section A-6. The unit of measure for water delivered hereunder shall be 1,000 gallons of water, U.S. Standard Liquid Measure, rounded to the nearest 1,000 gallons.

6. Seller shall maintain and calibrate (or arrange for calibration of) its metering equipment as often as it considers necessary or such time as Purchaser may show reasonable evidence of error. If, upon any test, the percentage of any inaccuracy thereof, if found to be in excess of two percent (2%) registration thereof, shall be corrected for a period extending back to the time such inaccuracy began, if such time is ascertainable, and if not, then for a period extending back one-half of the time elapsed since the last date of calibration, but in no event further back than a period of six (6) months. In the event Purchaser has provided no check meter with reference

thereto and if for any reason any master meter is out of service or out of repair so that the amount of water delivered cannot be ascertained or computed from the reading thereof, the water delivered during the period such meter is out of service or out of repair shall be determined by the Seller from the best available information, by correcting the error if the percentage of error is ascertainable by calibration tests or mathematical calculations, or by estimating the quantity of water by the deliveries made during preceding periods under similar conditions when the meter was registering accurately, or from pumpage records of the Seller and other customers on the same supply line.

7. In an effort to ensure regulatory compliance with water quality standards, the Seller, upon request, will provide to the Purchaser all required sampling, laboratory analysis and reporting data in connection with the Seller's water treatment plant and the Seller's transmission main up to the point of delivery.

B. The Purchaser Agrees:

1. To pay the Seller, not later than thirty (30) days from the date of invoice/ billing, for water delivered in accordance with the following schedule of rates:

   a. A minimum of $25,000 which amount shall also be the minimum payment each month throughout the term of the contract regardless of whether any water is taken. Minimum payment shall entitle the Purchaser to 18,000,000 gallons in the month for which the bill is paid. Unused quantities of water purchased by the minimum shall not be cumulative.

   b. $1.40 per 1,000 gallons for all water usage above the minimum quantity. This rate is subject to annual changes after the first year as stated in C-4 of this document and such rate shall also apply to the 18,000,000 gallons in B-l-

a. Seller shall have the right to limit Purchaser to those amounts and quantities stated in Section A-l of this document.

2. Should Purchaser fail to make any payments at the times herein specified, interest on such amounts shall accrue at the rate of ten percent (10%) per annum from the date such payment becomes due until paid in full with interest as herein specified.

3. Purchaser shall at all times have the right to records and audits of all costs for water treatment and delivery. Further, Purchaser shall have the right to discuss with the Seller its concerns or opposition to rate increases as well as a right to appeal such increase to the City Council of Texarkana, Texas, after discussion with the Seller's CEO/City Manager. Nothing in this section prevents the Purchaser from making appeal directly to the Texas Commission on Environmental Quality or its successor as allowed by law.

4. Purchaser may at any time seek additional water sources but agrees to pay the minimum payment in B-l-b of this document each month throughout the term of the contract.

5. That Seller is hereby authorized to enter onto any Purchaser's properties, whether held in fee simple or by easement, upon reasonable notice and within normal business hours, wherein there is reasonable need to operate and/ or maintain Seller's facilities located on Purchaser's properties, whether for the present system or for any mutually agreed upon future facilities. Operation and maintenance shall be provided by the Seller up to and including the meter located at the point of delivery, except as otherwise stated.

6. Seller's meter shall be of the type required by the City of Texarkana. Purchaser shall pay all costs of meter replacement at a frequency not greater than that of once every ten (10) years. Said costs shall be in addition to the wholesale costs in B-1 of this contract.

7. Purchaser further agrees to fix and collect such rates and charges for water services to its customers as will, in combination with any other funds legally available and reasonably assured of the purpose, make possible the prompt payment of all expenses of operating and maintaining its water system and all payments contracted hereunder.

8. Purchaser agrees that control and monitoring facilities by telemetry are a necessary part of the connection facilities in the form of SCADA equipment. The Purchaser agrees to install at the point of delivery, at its sole expense, SCADA equipment approved by the Seller. Such equipment to be compatible with Seller's current SCADA system.

9. Purchaser represents and covenants that all payments to be made hereunder shall constitute "operating expenses" of its waterworks system with the effect that the obligation to make such payments from its waterworks system revenues under this contract shall be an operating expense as defined by Chapter 1502 of the Texas Government Code.

C. <u>It is further mutually agreed between the Seller and the Purchaser:</u>

1. That this contract shall extend for a term of twenty (20) years retroactive from the Effective Date, and thereafter may be renewed or extended for such term, or terms, as may be agreed upon by Seller and Purchaser.

2. That the exact Point of Delivery of water to Atlanta shall be on the discharge side of the meter as the discharge line exits the metering building at the site of an existing 100,000 gallon elevated storage tank off of East Grandview Street, being East of State Highway 43 in Park Heights Subdivision near Hammock Subdivision in the City of Atlanta.

3. Force Majeure

a. If, for any reason of "force majeure", either of the parties hereto shall be rendered unable wholly or in part to carry out its obligation under this agreement, other than the obligation of Purchaser to make the payments required under the terms of Section B-1 and B-2 hereof, then if such party shall give notice and full particulars of such reasons in writing to the other party within a reasonable time after the occurrence of the event, or cause relied on, the obligation of the party giving such notice, so far as it is affected by such "force majeure", shall be suspended during the continuance of the inability than claimed, but for no longer period, and any such parties shall endeavor to remove or overcome such inability with all reasonable dispatch. The term "force majeure" as employed herein shall mean acts of God, strikes, lock-outs, or other industrial disturbances, acts of public enemy, orders or actions of any kind of the Government of the United States or the State of Texas, or any civil or military authority, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, hurricanes, storms, floods, wash-outs, breakage or accident to dams, machinery, pipelines, or canals or other structures of machinery, partial or entire failure of water supply and inability on the part of Seller to deliver water hereunder, or of Purchaser to receive water, on account of any other cause not reasonably within the control of the party claiming such liability. It is understood and agreed that the settlement of strikes and lock-outs shall be entirely within the discretion of the party having the difficulty, and that the above requirement that any force majeure shall be remedied with all reasonable dispatch shall not require the settlement of strikes and lockouts by acceding to the demands of the opposing parties when such settlement is unfavorable to it in the judgement of the party

having the difficulty. No failure of Seller to meet any obligation by reason of force majeure shall relieve Purchaser from its obligations to make payments required under the terms of Section B-l.

b. No damages shall be recoverable from Seller by reason of the suspension of delivery of water due to any of the causes above-mentioned. If Seller's ability to deliver water to Purchaser is affected by any of such causes, Seller shall promptly notify Purchaser, in writing, giving the particulars as soon as practicable after the occurrence of the cause or causes for such interruption.

c. It is expressly recognized by Purchaser that Seller may be compelled to make necessary alterations, perform maintenance, make repairs or construct extensions of new or additional water transporting or treatment facilities from time to time during the life of this contract and any suspension of delivery to Purchaser due to such operation shall not be cause for claim of damage against Seller provided all reasonable effort is used by Seller to provide Purchaser with water in accordance with this contract. In such case Seller shall give Purchaser at least forty-eight (48) hours notice or as much advance notice as may be practicable of the suspension of delivery and of the estimated duration thereof.

4. That the provisions of this contract pertaining to the schedule of rates in B-l-b to be paid by the Purchaser for water delivered are subject to modification at the end of every one (1) year period. On the first day of January, beginning January 1, 2010, the water rate then in effect in B-l-b will be adjusted, increased or decreased, in the amount equal to the change in the Consumer Price Index for All Urban Consumers, U.S. City Average for All Items. Notice of any other proposed increase, such as those that might be necessary to comply with a new or altered Federal water standard, shall be provided to the Purchaser ninety (90) days prior to the increase and

shall be justified to the Purchaser with the Seller showing a justified basis for the increase as tied to actual additional expenses to the Seller. The price per thousand gallon fee in B-l-b shall apply to the minimum rate for gallons in B-l-a.

5. That this contract is subject to such rules, regulations, or laws as may be applicable to similar agreements in this State and the Seller and Purchaser will collaborate in obtaining such permits, certificates, or the like as may be required to comply herewith.

6. That the Purchaser shall not enter into any contracts for the wholesale supply or resale of water supplied by the Seller to any other entity or agency or provide wholesale service outside its corporate limits, jurisdiction, or certificate of convenience without first having received approval, in writing, from the Seller. Such approval will not be unreasonably withheld. However, the Purchaser may provide retail service to current and future utility customers located inside or outside of the Purchaser's corporate limits but within the Purchaser's extraterritorial jurisdiction (ETJ). Nothing in this section will prohibit the Purchaser from exercising its full annexation authority under the laws of the State of Texas as they currently exist or shall in the future be amended.

7. That in the event of any occurrence rendering the Purchaser incapable of performing under this contract, any successor of the Purchaser, whether the result of legal process, assignment or otherwise, shall succeed to the rights of the Purchaser hereunder.

8. That the Seller is not responsible or liable for delivering a greater quantity of water to all combined customers than the capacity of the distribution main at the time of the execution of this contract.

9. In the event any sales or use taxes, or taxes of any similar nature are hereafter imposed upon the gathering, taking, sale, use or consumption of the water received

by Purchaser under this contract, the amount of such taxes shall be borne by Purchaser, in addition to all other charges, and whenever Seller shall be required to pay, collect, or remit any such taxes on water received by Purchaser, then Purchaser shall promptly reimburse Seller therefor.

10. In the event of an extended shortage of water or the supply of water available to the Seller is otherwise diminished over any extended period of time, the supply of water to Purchaser's consumers shall be reduced or diminished in the same ratio or proportion as the supply to other wholesale customers on the system is reduced or diminished.

11. Should any portion of this agreement be determined or declared to be invalid, illegal, or unenforceable for any reason, the remaining portions hereof shall remain in full force and effect as though the invalid, illegal or unenforceable portions were not contained herein.

12. Any amendment, alteration, deletion or waiver of any provision of this Agreement shall be valid only when expressed in writing and agreed to by both the Seller and Purchaser.

13. Any notice required to be given to the Seller under the provisions of this Agreement shall be given to the Seller by hand delivery or by mail to:

City of Texarkana, Texas
ATTN: CEO/City Manager
220 Texas Boulevard – P.O. Box 2008
Texarkana, Texas 75501

14. Any notice required to be given to the Purchaser under the provisions of this agreement shall be given to the Purchaser by hand delivery or by mail to:

City of Atlanta
315 N. Buckner – P.O. Box 669
Atlanta, Texas 75551

IN WITNESS WHEREOF, the parties hereto, acting under authority of their respective governing bodies, have caused this contract to be duly executed in several counterparts, each of which shall constitute an original.

CITY OF TEXARKANA, TEXAS

F. Larry Sullivan, Ed. D., CEO/City Manager

ATTEST:

Kelry Meredith, City Secretary
(seal)

APPROVED:

Jeffery C. Lewis
Atchley, Russell, Waldrop & Hlavinka, LLP
Retained Legal Counsel

CITY OF ATLANTA, TEXAS

Keith Crow, Mayor

ATTEST:

Janice Elliott, Atlanta City Secretary

APPROVED:

Jim Verschoyle
City Attorney

WATER PURCHASE CONTRACT

This contract for the sale and purchase of water is entered into as of the 8th day of November, 1978, between the City of Texarkana, Texas, Municipal Building, 3rd and Texas, Texarkana, Texas, 75501, hereinafter referred to as the "Seller" and the CENTRAL BOWIE COUNTY WATER SUPPLY CORPORATION (CBCWSC) of Bowie County, Texas, hereinafter referred to as the "Purchaser",

WITNESSETH:

WHEREAS, the Seller is fully empowered to enter into contracts with other cities for the purpose of selling water for municipal, domestic, industrial, and other useful purposes permitted by law and upon such terms and for such time as the parties may agree; and

WHEREAS, the Seller owns and operates a water treatment and supply system (hereinafter referred to as "System") capable of providing an adequate water supply for the foreseeable future to the Purchaser, and

WHEREAS, the Purchaser has a need for such water supply and desires to enter into a contractual arrangement with the Seller for water from said System, and

WHEREAS, by Resolution No 259-78 enacted on the 8th day of November, 1978, by the Seller, the sale of water to the Purchaser in accordance with the provisions of the said Resolution was approved, and the execution of this contract carrying out the said Resolution by the City Manager, and attested by the Secretary, was duly authorized, and

WHEREAS, by Resolution of the Board of Directors of the Purchaser, enacted on the 13 day of November 1978 the purchase of water from the Seller in accordance with terms set forth in the said Resolution was approved, and the execution of this contract by the Chairman and attested by the Secretary was duly authorized;

NOW, THEREFORE, in consideration of the foregoing and the mutual agreements hereinafter set forth,

A. The Seller Agrees:

1. To furnish the Purchaser at the point of delivery hereinafter specified, during the term of this contract or any renewal or extension thereof, potable treated water as may be required by the Purchaser not to exceed 3.0 million gallons per month. Water delivered under this contract shall be of the same quality as that distributed by Seller to its own consumers and

customers. Furthermore, Seller agrees to operate the treatment and transmission facilities insuch manner as will assure the approval of the Health Department of the State of Texas. If in the future it is agreed by both parties that a larger quantity of water will be delivered, any improvements required shall be at the expense of the Purchaser.

2. That water will be furnished at the normal operating pressure developed for economical operation of the Seller's system but not less than 20 P.S.I. from an existing water transmission main on the south side of the Texas and Pacific Railroad, 900 feet west of Texas State Highway 98 and approximately 25 miles west of Texarkana, Texas.

3. To allow the Purchaser to connect to the Seller's system in such a manner and with such materials as is required by the State and by the Seller; said materials up to the point of delivery to become the property of the Seller as a part of the System. This includes all monitoring, control, transmission, metering and attendant facilities and devices to provide water into the Purchaser's system, being done with the Seller's supervision and approval and at the Purchaser's expense.

4. To furnish the Purchaser at the above address not later than the 5th day of the month, with an itemized statement of the amount of water furnished the Purchaser during the preceding month. The quantity of water for which Purchaser shall be billed shall be based upon the reading of the master meter of the Seller except under conditions set out in Section A-7. The unit of measure for water delivered hereunder shall be 1,000 gallons of water, U. S. Standard Liquid Measure.

5. Seller shall maintain and calibrate (or arrange for calibration of) its metering equipment as often as it considers necessary or such time as Purchaser may show reasonable evidence of error. If, upon any test, the percentage of any inaccuracy thereof is found to be in excess of 2%, registration thereof shall be corrected for a period extending back to the time such inaccuracy began, if such time is ascertainable, and if not, then for a period extending back one-half of the time elapsed since the last date of calibration, but in no event further back than a period of six (6) months. In the event Purchaser has provided no check meter with reference thereto and if for any reason any master meter is out of service or out of repair so that the amount of water delivered cannot be ascertained or computed from the reading thereof, the water delivered during the period such meter is out of service or out of repair shall be agreed upon by the parties hereto,

by correcting the error if the percentage of error is ascertainable by calibration tests or mathematical calculations, or by estimating the quantity of water by the deliveries made during preceding periods under similar conditions when the meter was registering accurately, or from the pumpage records of the Seller and other customers on the same supply line.

B. The Purchaser Agrees:

1. To pay the Seller, not later than the 15th day of each month, for water delivered in accordance with the following schedule of rates:

a. $525.00 for the first 1,500,000 gallons, which amount shall also be the minimum rate per month.

b. $0.35 per 1000 gallons for water in excess of 1,500,000 gallons per month.

Should Purchaser fail to make any payments at the times herein specified, interest on such amounts shall accrue at the rate of ten per cent (10%) per month from the date such payment becomes due until paid in full with interest as herein specified. In the event such payment is not made within sixty (60) days from the date such payment becomes due, Seller may, at its option, discontinue delivery of water to Purchaser until the amount due Seller is paid in full including collection fees.

2. Title to all water supplied under this agreement shall remain in Seller to the point of delivery, and upon passing through the meter installed at that point, title to the water shall pass to Purchaser. Each party hereto agrees to save and hold the other harmless from all claims, demands and causes of action which may be asserted by anyone on account of the transportation, delivery and disposal of said water while title remains in such party.

3. That Seller is hereby authorized to enter onto any of Purchaser's properties, whether held in fee simple or by easement, wherein there is reasonable need to operate and/or maintain Seller's facilities located on Purchaser's properties, whether for the present system or for any mutually agreed upon future facilities.

4. Seller's meter shall be of the type required by the City of Texarkana. Purchaser shall pay all costs of connections and meter required in obtaining water purchased. Purchaser's plans and specifications for facilities between the point of connection to Seller's line and Purchaser's storage facility shall be approved by Seller, when such storage facilities are

constructed.

5. Purchaser further agrees to fix and collect such rates and charges for water services to its customers as will, in combination with any other funds legally available and reasonably assured for the purpose, make possible the prompt payment of all expenses of operating and maintaining its Water System and all payments contracted hereunder.

6. Purchaser represents and covenants that all payments to be made hereunder shall constitute "operating expenses" of its Waterworks System with the effect that the obligation to make such payments from its Waterworks revenues under this con-ract shall be an operating expense as defined by Article 1113 of the Revised Civil Statutes of Texas, 1925, as amended.

C. It is further mutually agreed between the Seller and the Purchaser:

1. That this contract shall extend for a term of thirty (30) years from the date first mentioned above and, thereafter may be renewed or extended for such term, or terms, as may be agreed upon by the Seller and Purchaser.

2. That ten (10) days prior to the estimated date of completion of construction of the Purchaser's water supply distribution system, the Purchaser will notify the Seller in writing the date for the initial delivery of water.

3. When requested by the Purchaser the Seller will make available to the contractor at the point of delivery, or other point reasonably close thereto, water sufficient for testing and flushing the system of the Purchaser during construction, for which the contractor shall pay a flat fee of $100.00 if metering equipment has not been installed, or $0.35 per 1000 gallons if metering equipment has been installed.

4. That the provisions of this contract pertaining to the schedule of rates to be paid by the Purchaser for water delivered are subject to modification at the end of every one (1) year period. Any increase or decrease in rates shall be based on a demonstrable increase or decrease in the costs of performance hereunder, but such costs shall not include increased capitalization of the Seller's system, except as set out in this agreement. In no event shall Purchaser's rate be less than the unit cost for minimum payments for the customers designated as member cities of the original Lake Texarkana Water Supply Corporation. Other provisions of this contract may be modified or altered by mutual agreement.

5. That this contract is subject to such rules, regulations, or

laws as may be applicable to similar agreements in this State and the Seller and Purchaser will collaborate in obtaining such permits, certificates, or the like, as may be required to comply herewith.

6. That the construction of the water supply distribution system by the Purchaser is being financed by a loan made or insured by, and/or a grant from, the United States of America, acting through the Farmers Home Administration of the United States Department of Agriculture, and the provisions hereof pertaining to the undertakings of the Purchaser are conditioned upon the approval, in writing, of the State Director of the Farmers Home Administration.

7. That in the event of any occurrence rendering the Purchaser incapable of performing under this contract, any successor of the Purchaser, whether the result of legal process, assignment, or otherwise, shall succeed to the rights of the Purchaser hereunder.

8. In the event any sales or use taxes, or taxes of any similar nature are hereafter imposed upon the gathering, taxing, sale use or consumption of the water received by Purchaser under this contract, the amount of such taxes shall be borne by Purchaser, in addition to all other charges, and whenever Seller shall be required to pay, collect, or remit any such taxes on water received by Purchaser, then Purchaser shall promptly reimburse Seller therefor.

9. In the event of an extended shortage of water or the supply of water available to the Seller is otherwise diminished over an extended period of time, the supply of water to Purchaser's consumers shall be reduced or diminished in the same ratio or proportion as the supply to Seller's consumers is reduced or diminished.

D. Force Majeure:

1. If for any reason of "force majeure" either of the parties hereto shall be rendered unable wholly or in part to carry out its obligation under this agreement, other than the obligation of Purchaser to make the payments required under the terms of Section B-1 hereof, then if such party shall give notice and full particulars of such reasons in writing to the other party within a reasonable time after the occurrence of the event, or cause relied on, the obligation of the party giving such notice, so far as it is affected by such "force majeure", shall be suspended during the continuance of the inability then claimed, but for no longer period, and any such parties shall

endeavor to remove or overcome such inability with all reasonable dispatch. The term "force majeure" as employed herein shall mean acts of God, strikes, lock-outs, or other industrial disturbances, acts of public enemy, orders or actions of any kind of the Government of the United States or of the State of Texas, or any civil or military authority, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, hurricanes, storms, floods, washouts, breakage or accident to dams, machinery, pipelines, or canals or other structures or machinery, partial or entire failure of water supply and inability on the part of Seller to deliver water hereunder, or of Purchaser to receive water, on account of any other cause not reasonably within the control of the party claiming such inability. It is understood and agreed that the settlement of strikes and lock-outs shall be entirely within the discretion of the party having the difficulty, and that the above requirement that any force majeure shall be remedied with all reasonable dispatch shall not require the settlement of strikes and lock-outs by acceding to the demands of the opposing parties when such settlement is unfavorable to it in the judgment of the party having the difficulty. No failure of Seller to meet any obligation by reason of force majeure shall relieve Purchaser from its obligations to make the payments required under the terms of Section B-1 hereof.

2. No damage shall be recoverable from Seller by reason of the suspension of delivery of water due to any of the causes above mentioned. If Seller's ability to deliver water to Purchaser is affected by any of such causes, Seller shall promptly notify Purchaser in writing giving the particulars as soon as practicable after the occurrence of the cause or causes for such interruption. If the supply of water available to Seller is insufficient for any reason to serve the requirements of all of its customers, then the available amount of water will be allocated by Seller so as to meet the requirements of its various customers in accordance with their respective needs.

3. It is expressly recognized by Purchaser that Seller may be compelled to make necessary alterations, repairs or extensions of new or additional water transporting facilities from time to time during the life of this contract and any suspension of delivery to Purchaser due to such operation shall not be cause for claim of damage on part of Seller provided all reasonable effort is used by Seller to provide Purchaser with water in accordance with this contract. In such case Seller shall give Purchaser as much advance notice as may be practicable of the suspension of delivery and of the estimated duration thereof.

IN WITNESS WHEREOF, the parties hereto, acting under authority under authority of their respective governing bodies, have caused this contract to be duly executed in several counterparts, each of which shall constitute an original, all as of the day and year first above written.

CITY OF TEXARKANA, TEXAS

By _____
City Manager

ATTEST:

_____
City Secretary

(Seal)

CENTRAL BOWIE COUNTY WATER SUPPLY CORPORATION

_____
Chairman

ATTEST:

_____
Secretary

(Seal)

AMENDMENT TO WATER PURCHASE CONTRACT

THIS Contract is made and entered into this 27th day of April, 2009, by and between the City of Texarkana, Texas, a municipality within Bowie County, Texas, hereinafter referred to as "Seller" and the City of Redwater, Texas of BOWIE COUNTY, TEXAS, hereinafter referred to as "Purchaser".

WITNESSETH:

WHEREAS, the Seller is fully empowered to enter into contracts with other cities for the purpose of selling water for municipal, domestic, industrial, and other useful purposes permitted by law and upon such terms and for such time as the parties may agree; and,

WHEREAS, the aforementioned parties entered into a Water Purchase Contract on the 7th day of March, 1978; which was last amended on the 28th day of January, 2008; and,

WHEREAS, by Ordinance No. 38-09 enacted on the 27th day of April, 2009, by the Seller, the sale of water to the Purchaser in accordance with the provisions of said Ordinance was approved, and the execution of this Amendment carrying out the said Ordinance by the City Manager, and attested by the Secretary, was duly authorized; and,

WHEREAS, by Resolution of the City Council of the Purchaser, enacted on the 1 day of June, 2009, the purchase of water from the Seller in accordance with the terms set forth in the said Resolution was approved, and the execution of this Amendment by the Mayor and attested by the Secretary, was duly authorized.

NOW THEREFORE, in accordance with paragraph C. 5 of the original contract, and in consideration of the foregoing, Seller and Purchaser agree to the following modifications to the aforementioned contract;

Paragraph B.1.a and Paragraph B.1.b are amended to read as follows:

B. THE PURCHASER AGREES:

1. To pay the Seller, not later than the 15th day of each month, for water delivered in accordance with the following schedule of rates:

   a. $1,110.00 for the first 750,000 gallons, which amount shall also be the minimum rate per month.

   b. $1.48 per 1,000 gallons for water in excess of 750,000 gallons per month.

The foregoing Amendment shall be attached to and become a part of the original Contract and shall become effective on the 7th day of March, 2009.

All other provisions of the aforementioned Contract shall remain in full force and effect.

IN WITNESS WHEREOF, the Parties hereto, acting under authority of their respective governing bodies, have caused this Contract Amendment to be duly executed in several counterparts, each of which shall constitute an original, all as of the day and the year first above written.

CITY OF TEXARKANA, TEXAS

By _____

CEO/City Manager

ATTEST:

_____

City Secretary

CITY OF REDWATER, TEXAS

By _____

Mayor

ATTEST:

_____

Secretary

pjw/mydocs/contracts
April 2009

WATER PURCHASE CONTRACT

THIS contract for the sale and purchase of water is entered into as of the 23rd day of January, 2006, between the City of Texarkana, Texas, Texas City Hall, 220 Texas Boulevard, Texarkana, Texas 75501, hereinafter referred to as "Seller" and the City of Leary of Bowie County, Texas, hereinafter referred to as the "Purchaser".

WITNESSED:

WHEREAS, the Seller is fully empowered to enter into contracts with other cities for the purpose of selling water for municipal, domestic, industrial and other useful purposes permitted by law and upon such terms and for such time as the parties may agree; and

WHEREAS, the Seller owns and operates a water treatment and supply system (hereinafter referred to as the "System") capable of providing an adequate water supply for the foreseeable future to the Purchaser; and

WHEREAS, the Purchaser has a need for such water supply and desires to enter into a contractual arrangement with the Seller for water from said System; and

WHEREAS, by Ordinance No. 346-05 enacted on the 12 day of December, 2005, by the Seller, the sale of water to the Purchaser in accordance with the provisions of the said Ordinance was approved, and the execution of this contract carrying out the said Ordinance by the City Manager, and attested by the Secretary, was duly authorized; and

WHEREAS, by Ordinance No: 01-23-06 of the City Council of Purchaser, enacted on the 23 day of January, 2006, the purchase of water from the Seller in accordance with terms set forth in the said Ordinance was approved, and the execution of this contract by the Mayor and attested by the Secretary was duly authorized;

NOW, THEREFORE, in consideration of the foregoing and the mutual agreements hereinafter set forth,

A. The Seller agrees:

1. To furnish the purchaser at the point of delivery hereinafter specified during the term of this contract or any renewal or extensions thereof, potable water as may be required by the Purchaser not to exceed nine (9) million gallons per month. Water shall be taken at a rate not to exceed 240 gallons per minute (gpm) nor shall water exceed 350,000 gallons usage on any calendar day. Seller shall retain the right to control water supplied to Purchaser within the previously stated not to exceed quantities. Water delivered under this contract shall be of the same quality as that distributed by Seller to its other customers on this system. If, in the future, it is agreed by both parties that if a larger quantity of water is desired by the Purchaser, any improvements required shall be at the expense of the Purchaser.

2. To provide treated surface water meeting all applicable Texas and Federal regulations regarding water quality, including the Safe Drinking Water Act. Except as provided in this section A.2., Texarkana makes no warranty expressed or implied, regarding the quality or delivery pressure of the water, including the implied warranties of merchantability and fitness for a particular purpose. The City of Leary hereby releases and discharges Texarkana from any and all fines, demands, judgements, liabilities or claims arising by reason of or in connection with the delivery of water which meets the requirements of this section A.2.

3. To allow the Purchaser to connect to the Seller's system in such a manner and with such materials as are required by the State and by the Seller. Purchaser shall construct a meter facility that includes, at a minimum, a waterproof enclosure, appropriately sized water meter, telemetry, control facilities, transmission facilities and backflow prevention device or positive air gap, all acceptable to Texarkana Water Utilities and meeting all state and local rules, codes and specifications. The materials up to the exact point of delivery to become the property of the Seller as a part of the System. This includes all monitoring, control, transmission, metering and attendant facilities and devices to provide water into the Purchaser's system, being done with the Seller's supervision and approval and at the Purchaser's expense, except all backflow

prevention facilities shall remain the property and responsibility of the purchaser. Any future connections to the Seller's system must be done by mutual agreement of the Purchaser and Seller by contract amendment.

4. To and does recognize a positive air gap as being the preferable means of backflow prevention. No connections shall be allowed between the meter and the air gap and air gap shall be located at the shortest reasonable distance from the meter. Plans for the meter connection and backflow shall be approved by the Seller prior to commencing construction and the installation shall be approved by the Seller prior to the actual delivery of water to the Purchaser.

5. To furnish the Purchaser at the above address not later than the 15th day of the month following water usage, with an itemized statement of the amount of water furnished the Purchaser and the charges for such during the preceding month. The quantity of water for which Purchaser shall be billed shall be based upon the reading of the master meter of the Seller except under conditions set out in Section A-6. The unit of measure for water delivered hereunder shall be 1,000 gallons of water, U.S. Standard Liquid Measure, rounded to the nearest 1,000 gallons.

6. To maintain and calibrate (or arrange for calibration of) its metering equipment as often as it considers necessary or such time as Purchaser may show reasonable evidence of error. If, upon any test, the percentage of any inaccuracy thereof if found to be in excess of two percent (2%), registration thereof shall be corrected for a period extending back to the time such inaccuracy began, if such time is ascertainable, and if not, then for a period extending back one-half of the time elapsed since the last date of calibration, but in no event further back than a period of six (6) months. In the event Purchaser has provided no check meter with reference thereto and if for any reason any master meter is out of service or out of repair so that the amount of water delivered cannot be ascertained or computed from the reading thereof, the water delivered during the period such meter is out of service or out of repair shall be determined by the Seller from the best available information, by correcting the error if the percentage of error is ascertainable by calibration tests or

mathematical calculations, or by estimating the quantity of water by the deliveries made during preceding periods under similar conditions when the meter was registering accurately, or from the pumpage records of the Seller and other customers on the same supply line.

B. The Purchaser Agrees:

1. To pay the Seller, not later than the thirty (30) days from the date of invoice/billing, for water delivered into accordance with the following schedule of rates:
   a. $1,650.00 for the first 1,250,000 gallons, which amount shall also be the minimum rate per month.
   b. $1.32 per 1,000 gallons for water in excess of 1,250,000 gallons per month up to nine million (9) gallons per month.
   c. Water in excess of nine million (9) gallons per month or greater than 350,000 on any calendar day shall be at a rate of $1.79 per 1,000 gallons.
2. That should Purchaser fail to make any payments at the times herein specified, interest on such amounts shall accrue at the rate of ten percent (10%) per annum from the date such payment becomes due until paid in full with interest as herein specified. In the event such payment is not made within sixty (60) days from the date such payment becomes due, Seller may, at its option, discontinue delivery of water to Purchaser until the amount due Seller is paid in full including collection fees.
3. That title to all water supplied under this agreement shall remain with Seller to the point of delivery, which shall be the discharge side of the meter and at that point, title to the water shall pass to Purchaser. Each party hereto agrees to save and hold the other harmless from all claims, demands, and causes of action which may be asserted by anyone on account of transportation, delivery and disposal of said water while title remains in such party.
4. That Seller is hereby authorized to enter onto any of Purchaser's properties, whether held in fee simple or by easement, when there is reasonable need to operate and/or maintain Seller's facilities located on Purchaser's properties, whether for the present

system or for any mutually agreed upon future facilities. Operation and maintenance shall be provided by the Seller up to and including the meter located at this point of delivery , except as otherwise stated.

5. That the meter shall be of the type required by the Seller. Purchaser shall pay all costs of meter replacement at a frequency not greater than that of once every ten (10) years. Said costs shall be in addition to the wholesale costs of water set forth in B-1.

6. To fix and collect such rates and charges for water services to its customers as will, in combination with any other funds legally available and reasonably assured for the purpose, make possible the prompt payment of all expenses of operating and maintaining its Water System and all payments contracted hereunder.

7. That backflow devices, including any positive air gap system, necessary to protect the Seller's system are a necessary part of the connection facilities and agrees to test and maintain such facilities as necessary and required by state or local codes or statutes, but in no case shall maintenance and or inspections be performed less than annually. Purchaser shall supply all records of such maintenance and inspections on an annual basis to Seller. Seller is hereby authorized to enter onto any of Purchaser's properties, whether held in fee simple or by easement, necessary to verify maintenance and inspection of backflow prevention device or any other portion of the metering facility. Purchaser agrees that during the term of the contract, should the existing backflow measures be inadequate to meet the State's Standards, Purchaser will bring the backflow measures up to State's Standards at Purchasers sole expense.

8. That control and monitoring facilities by telemetry are a necessary part of the connection facilities in the form of Supervisor Control and Data Acquisition (SCADA) equipment. The Purchaser agrees to install at his sole expense SCADA equipment approved by the Sellers. Such equipment to be compatible with Seller's current SCADA system and is to be approved by Seller prior to installation.

9. That Purchaser represents and covenants that all payments to be made hereunder shall constitute "operating expenses" of its Waterworks System with the effect that the obligation to make such payments from its Waterworks revenues under this contract

shall be an operating expense as defined by Article 1113 of the Revised Civil Statues of Texas, 1925, as amended.

C. It is further mutually agreed between the Seller and the Purchaser:

1. That this contract shall extend for a term of forty (40) years from the date of approval as evidenced by the date of passage and approval by the Texarkana City Council and; thereafter may be renewed or extended for such term, or terms, as may be agreed upon by Seller and Purchaser.

2. That the Point of Delivery for the Leary Water System shall be the discharge side of a meter located on the thirty inch (30") water transmission main also known as the North Texarkana Water Transmission Main. The water meter shall be located approximately fifty feet (50') north of the centerline of U.S. Highway No. 82 and approximately 1,480 feet east of the intersection of said Highway 82 and Texas Farm to Market Road No. 1398. Said Point of Delivery is also approximately 2,190 feet west of the intersection of said Highway 82 and Texas Farm to Market Road No. 2253.

3. That Purchaser shall not be guaranteed any specific quantity or pressure of water whenever Seller's water supply is limited or when Seller's equipment may become inoperative due to unforeseen breakdown or scheduled maintenance and repairs. Seller is in no case to be held to any liability for failure to furnish any specific amount or pressure of water.

4. Force Majeure

a. If, for any reason of "force majeure", either of the parties hereto shall be rendered unable wholly or in part to carry out its obligation under this agreement, other than the obligation of Purchaser to make the payments required under the terms of Section B-1 and B-2 hereof, then if such party shall give notice and full particulars of such reasons in writing to the other party within a reasonable time after the occurrence of the event, or cause relied on, the obligation of the party giving such notice, so far as it is affected by such "force majeure", shall be suspended during the continuance of the

inability then claimed, but for no longer period, and any such parties shall endeavor to remove or overcome such inability with all reasonable dispatch. The term "force majeure" as employed herein shall mean acts of God, strikes, lock-outs, or other industrial disturbances, acts of public enemy, orders or actions of any kind of the Government of the United States or the State of Texas, or any civil or military authority, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, hurricanes, storms, floods, wash-outs, breakage or accident to dams, machinery, pipelines, or canals or other structures of machinery, partial or entire failure of water supply and inability on the part of Seller to deliver water hereunder, or of Purchaser to receive water, on account of any other cause not reasonable within the control of the party claiming such inability. It is understood and agreed that the settlement of strikes and lock-outs shall be entirely within the discretion of the party having the difficulty, and that the above requirement that any force majeure shall be remedied with all reasonable dispatch shall not require the settlement of strikes and lock-outs by acceding to the demands of the opposing parties when such settlement is unfavorable to it in the judgment of the party having the difficulty. No failure of Seller to meet any obligation by reason of force majeure shall relieve Purchaser from its obligations to make the payments required under the terms of Section B-1 and B-2 when water is available at the point of delivery.

b. No damages shall be recoverable from Seller by reason of the suspension of delivery of water due to any of the causes above-mentioned. If Seller's ability to deliver water to Purchaser is affected by any of such causes, Seller shall promptly notify Purchaser, in writing, giving the particulars as soon as practicable after the occurrence of the cause or causes for such interruption. Under circumstances of "force majeure", Purchaser shall only be responsible for the water delivered using costs from B.1b.

c. It is expressly recognized by Purchaser that Seller may be compelled to make

necessary alterations, perform maintenance, make repairs or construct extensions of new or additional water transporting facilities from time to time during the life of this contract and any suspension of delivery to Purchaser due to such operation shall not be cause for claim of damage against Seller provided all reasonable effort is used by Seller to provide Purchaser with water in accordance with this contract. In such case Seller shall give Purchaser as much advance notice as may be practicable of the suspension of delivery and of the estimated duration thereof.

5. That the provisions of this contract pertaining to the schedule of rates to be paid by the Purchaser for water delivered are subject to modification annually, except from the date of initiation of service rates shall not be raised for a period of two (2) years at which time rates shall be adjusted to equal those wholesale customers using the same facilities and resources as Leary. Wholesale rates shall not exceed those of other wholesale customers using the same facilities and resources as Leary.

6. That this contract is subject to such rules, regulations, or laws as may be applicable to similar agreements in this State and the Seller and Purchaser will collaborate in obtaining such permits, certificates, or the like, as may be required to comply herewith.

7. That the Purchaser shall not enter into any contracts for the wholesale supply, or resale, of water supplied by the Seller to any other entity or agency or provide service outside its corporate limits, extra territorial jurisdiction, or certificate of convenience without first having received approval, in writing, from the Seller.

8. That in the event of any occurrence rendering the Purchaser incapable of performing under this contract, any successor of the Purchaser, whether the result of legal process, assignment or otherwise, shall succeed to the rights of the Purchaser hereunder.

9. That in the event any sales or use taxes, or taxes of any similar nature are hereafter imposed upon the gathering, taking, sale, use or consumption of the water received by Purchaser under this contract, the amount of such taxes shall be borne by

Purchaser, in addition to all other charges, and whenever Seller shall be required to pay, collect, or remit any such taxes on water received by Purchaser, then Purchaser shall promptly reimburse Seller therefor.

10. In the event of an extended shortage of water or the supply of water available to the Seller is otherwise diminished over any extended period of time, the supply of water to Purchaser's consumers shall be reduced or diminished in the same ratio or proportion as the supply to other wholesale customers on the system is reduced or diminished.

IN WITNESS WHEREOF, the parties hereto, acting under authority of their respective governing bodies, have caused this contract to be duly executed in several counterparts, each of which shall constitute an original, all as of the day and year first above written.

CITY OF TEXARKANA, TEXAS

George T. Shackelford, City Manager

ATTEST:

Geri Haddock, City Secretary
(seal)

APPROVED AS TO LEGALITY AND FORM:

Thomas Arnold, City Attorney

CITY OF LEARY

Randy Mansfield, Mayor

ATTEST:

Secretary
(seal)

194-201

Amendment to Water Purchase Contract

This Amendment to Water Purchase Contract ("Amendment") is made and entered into by and between the City of Texarkana, Texas ("Seller"), and the City of Leary, Texas ("Purchaser").

WHEREAS, Purchaser and Seller have entered into a "Water Purchase Contract" and amendments thereto; and

WHEREAS, Seller and Riverbend Water Resources District ("Riverbend") have entered into an interlocal cooperation agreement signed March 5, 2010, where Seller has agreed to pay Riverbend advances and fees (expressed in U.S. cents) per 1,000 gallons of potable water processed through "COMPANY facilities" (as that term is defined in the interlocal cooperation agreement, said definition incorporated herein by reference for all purposes), Texas-metered sales only, excluding metered purchases by the following: (i) the Riverbend statutory members, other than Seller; and (ii) any other Texas municipality or local government entity or political subdivision who may pay or dedicate monies to Riverbend for purposes of becoming a Riverbend member or other purposes; and

WHEREAS, Purchaser purchases from Seller potable water processed through "COMPANY facilities" and has petitioned Riverbend for membership; and

WHEREAS, to further interlocal cooperation in the development of regional water resources, Seller is agreeable to a $0.045 per 1,000 gallons reduction in the applicable purchase price of water as set forth in the "Water Purchase Contract" and amendments thereto provided that (i) Purchaser dedicates or pays such amount to Riverbend, and (ii) such payment or dedication of monies to Riverbend results in an equal reduction of Seller's obligation to pay under its interlocal cooperation agreement with Riverbend.

NOW THEREFORE, pursuant to Chapter 791 of the Texas Government Code, and in consideration of the premises and the mutual promises, covenants and agreements contained herein, Purchaser and Seller agree to the following Amendment to their "Water Purchase Contract":

1. For purposes of becoming a Riverbend member, Purchaser pays or dedicates to Riverbend from Purchaser's own revenues $0.045 per 1,000 gallons of potable water supplied to it by Seller. Purchaser shall be solely responsible to Riverbend for such payment.

2. In consideration of Purchaser's payment or dedication to Riverbend as set forth in paragraph 1, above, Seller agrees to a $0.045 per 1,000 gallons reduction in the applicable purchase price of water as set forth in the "Water Purchase Contract" and amendments thereto provided that such payment or dedication of monies to Riverbend results in an equal reduction of Seller's obligation to pay under its interlocal cooperation agreement with Riverbend.

3. Upon approval of this Amendment by the governing bodies of Seller and Purchaser, this Amendment shall become effective on the first day of the month following the date Purchaser becomes a member of Riverbend and begins making payments as described in Section 1 of this Amendment; and this Amendment shall then be attached to and become a part of the aforementioned "Water Purchase Contract". All other provisions of the aforementioned "Water Purchase Contract", as amended from time to time, shall remain in full force and effect

IN WITNESS WHEREOF, Seller and Purchaser, acting under authority of their respective governing bodies, have caused this Amendment to by duly executed by their respective authorized officials, as of the date or dates set forth below.

Seller -- The City of Texarkana, Texas

By: _____ Date: 11-30-11, 2011
F. Larry Sullivan, Ed. D.
City Manager

ATTEST:

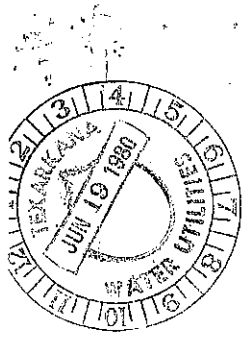
_____
Kerry Meredith, City Secretary

Purchaser -- The City of Leary, Texas

By: _____ Date: 12/12, 2011

ATTEST:

_____
City Secretary



WATER PURCHASE CONTRACT

This contract for the sale and purchase of water is entered into as of the 19th day of June, 1980, between the City of Texarkana, Texas, Municipal Building, 3rd and Texas, Texarkana, Texas, 75501, hereinafter referred to as the "Seller" and the City of Nash of Bowie County, Texas, hereinafter referred to as the "Purchaser",

WITNESSETH:

WHEREAS, the Seller is fully empowered to enter into contracts with other cities for the purpose of selling water for municipal, domestic, industrial, and other useful purposes permitted by law and upon such terms and for such time as the parties may agree; and

WHEREAS, the Seller owns and operates a water treatment and supply system (hereinafter referred to as "System") capable of providing an adequate water supply for the foreseeable future to the Purchaser, and

WHEREAS, the Purchaser has a need for such water supply and desires to enter into a contractual arrangement with the Seller for water from said System, and

WHEREAS, by Resolution No. 135-80 enacted on the 19th day of May, 1980, by the Seller, the sale of water to the Purchaser in accordance with the provisions of the said Resolution was approved, and the execution of this contract carrying out the said Resolution by the City Manager, and attested by the Secretary, was duly authorized, and

WHEREAS, by Resolution No. 6-80 of the City Council of the Purchaser, enacted on the 13th day of May, 1980 the purchase of water from the Seller in accordance with terms set forth in the said Resolution was approved, and the execution of this contract by the Mayor and attested by the Secretary was duly authorized;

NOW, THEREFORE, in consideration of the foregoing and the mutual agreements hereinafter set forth,

A. The Seller Agrees:

1. To furnish the Purchaser at the point of delivery hereinafter specified, during the term of this contract or any renewal or extension thereof, potable treated water as may be required by the Purchaser not to exceed 10.0 million gallons per month. Water delivered under this contract

shall be of the same quality as that distributed by Seller to its own consumers and customers. Furthermore, Seller agrees to operate the treatment and transmission facilities in such manner as will assure the approval of the Health Department of the State of Texas. If in the future it is agreed by both parties that a larger quantity of water will be delivered, any improvements required shall be at the expense of the Purchaser.

2. That water will be furnished at the normal operating pressure developed for economical operation of the Seller's system but not less than 20 P.S.I. from an existing thirty inch main on the north side of Highway 82 at Johnson Street located in Nash, Texas.

3. To allow the Purchaser to connect to the Seller's system in such a manner and with such materials as are required by the State and by the Seller; said materials up to the point of delivery to become the property of the Seller as a part of the System. This includes all monitoring, control, transmission, metering and attendant facilities and devices to provide water into the Purchaser's system, being done with the Seller's supervision and approval and at the Purchaser's expense.

4. That due to the urgent need for water supply to the Purchaser's customers, to allow the Purchaser to install, at Purchaser's expense and on a temporary basis, a backflow preventer in lieu of the air break normally required of wholesale purchasers. Said backflow preventer will be replaced by an air break constructed at the Purchaser's existing ground storage tank.

5. That due to the Purchaser's funding capability, the above referenced facilities will be installed as soon as is economically feasible with an anticipated date of construction completion not later than _____ January 16, _____, 1981.

6. To furnish the Purchaser at the above address not later than the 5th day of the month, with an itemized statement of the amount of water furnished the Purchaser during the preceding month. The quantity of water for which Purchaser shall be billed shall be based upon the reading of the master meter of the Seller except under conditions set out in Section A-7. The unit of measure for water delivered hereunder shall be 1,000 gallons of water, U. S. Standard Liquid Measure.

7. Seller shall maintain and calibrate (or arrange for

calibration of) its metering equipment as often as it considers necessary or such time as Purchaser may show reasonable evidence of error. If, upon any test, the percentage of any inaccuracy thereof is found to be in excess of 2%, registration thereof shall be corrected for a period extending back to the time such inaccuracy began, if such time is ascertainable, and if not, then for a period extending back one-half of the time elapsed since the last date of calibration, but in no event further back than a period of six (6) months. In the event Purchaser has provided no check meter with reference thereto and if for any reason any master meter is out of service or out of repair so that the amount of water delivered cannot be ascertained or computed from the reading thereof, the water delivered during the period such meter is out of service or out of repair shall be agreed upon by the parties hereto, by correcting the error if the percentage of error is ascertainable by calibration tests or mathematical calculations, or by estimating the quantity of water by the deliveries made during preceding periods under similar conditions when the meter was registering accurately, or from the pumpage records of the Seller and other customers on the same supply line.

B. The Purchaser Agrees:

1. To pay the Seller, not later than the 15th day of each month, for water delivered in accordance with the following schedule of rates:

a. $1,600.00 for the first 4.0 million gallons, which amount shall also be the minimum rate per month.

b. $0.45 per 1,000 gallons for water in excess of 4.0 million gallons per month.

Should Purchaser fail to make any payments at the times herein specified, interest on such amounts shall accrue at the rate of ten per cent (10%) per annum from the date such payment becomes due until paid in full with interest as herein specified. In the event such payment is not made within sixty (60) days from the date such payment becomes due, Seller may, at its option, discontinue delivery of water to Purchaser until the amount due Seller is paid in full including collection fees.

2. Title to all water supplied under this agreement shall remain in Seller to the point of delivery, which shall be the meter, and

upon passing through the meter installed at that point, title to the water shall pass to Purchaser. Each party hereto agrees to save and hold the other harmless from all claims, demands and causes of action which may be asserted by anyone on account of the transportation, delivery and disposal of said water while title remains in such party.

3. That Seller is hereby authorized to enter onto any of Purchaser's properties, whether held in fee simple or by easement, wherein there is reasonable need to operate and/or maintain Seller's facilities located on Purchaser's properties, whether for the present system or for any mutually agreed upon future facilities. Operation and maintenance shall be provided by the Seller up to and including the meter located at the point of delivery.

4. That until such time as the Purchaser constructs the metering facilities, at Purchaser's expense, onto the Purchaser's property adjacent to the ground storage, and provides the normal security of said area, the Purchaser will pay the Seller in accordance with the rates established herein on an amount to be estimated based on previous consumption history of the Purchaser, said payments to be made as herein specified as if for metered water. Purchaser shall provide Seller such previous consumption information and records as the Seller finds necessary to establish said estimate.

5. Seller's meter shall be of the type required by the City of Texarkana. Purchaser shall pay all costs of connections and meter required in obtaining water purchased. Purchaser's plans and specifications for facilities between the point of connection to Seller's line and Purchaser's storage facility shall be approved by Seller.

6. Purchaser further agrees to fix and collect such rates and charges for water services to its customers as will, in combination with any other funds legally available and reasonably assured for the purpose, make possible the prompt payment of all expenses of operating and maintaining its Water System and all payments contracted hereunder.

7. Purchaser represents and covenants that all payments to be made hereunder shall constitute "operating expenses" of its Waterworks System with the effect that the obligation to make such payments from its Waterworks revenues under this contract shall be an operating expense as

defined by Article 1113 of the Revised Civil Statutes of Texas, 1925, as amended.

C. It is further mutually agreed between the Seller and the Purchaser:

1. That this contract shall extend for a term of thirty (30) years from the date of the initial delivery of any water as shown by the first bill submitted by the Seller to the Purchaser and, thereafter may be renewed or extended for such term, or terms, as may be agreed upon by the Seller and Purchaser.

2. When requested by the Purchaser the Seller will make available to the contractor at the point of delivery, or other point reasonably close thereto, water sufficient for testing and flushing the system of the Purchaser during construction, for which the contractor shall pay a flat fee of $100.00 if metering equipment has not been installed, or $0.40 per 1,000 gallons if metering equipment has been installed.

3. Force Majeure

a. If for any reason of "force majeure" either of the parties hereto shall be rendered unable wholly or in part to carry out its obligation under this agreement, other than the obligation of Purchaser to make the payments required under the terms of Section B-1 hereof, then if such party shall give notice and full particulars of such reasons in writing to the other party within a reasonable time after the occurrence of the event, or cause relied on, the obligation of the party giving such notice, so far as it is affected by such "force majeure", shall be suspended during the continuance of the inability then claimed, but for no longer period, and any such parties shall endeavor to remove or overcome such inability with all reasonable dispatch. The term "force majeure" as employed herein shall mean acts of God, strikes, lock-outs, or other industrial disturbances, acts of public enemy, orders or actions of any kind of the Government of the United States or of the State of Texas, or any civil or military authority, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, hurricanes, storms, floods, wash-outs, breakage or accident to dams, machinery, pipelines, or canals or other structures or machinery, partial or entire failure of water supply and inability on the part of Seller to deliver water hereunder, or of Purchaser to receive water, on account of any other cause not

reasonably within the control of the party claiming such inability. It is understood and agreed that the settlement of strikes and lock-outs shall be entirely within the discretion of the party having the difficulty, and that the above requirement that any force majeure shall be remedied with all reasonable dispatch shall not require the settlement of strikes and lock-outs by acceding to the demands of the opposing parties when such settlement is unfavorable to it in the judgment of the party having the difficulty. No failure of Seller to meet any obligation by reason of force majeure shall relieve Purchaser from its obligations to make the payments required under the terms of Section B-1 hereof.

b. No damage shall be recoverable from Seller by reason of the suspension of delivery of water due to any of the causes above mentioned. If Seller's ability to deliver water to Purchaser is affected by any of such causes, Seller shall promptly notify Purchaser in writing giving the particulars as soon as practicable after the occurrence of the cause or causes for such interruption. If the supply of water available to Seller is insufficient for any reason to serve the requirements of all of its customers, then the available amount of water will be allocated by Seller so as to meet the requirements of its various customers in accordance with their respective needs.

c. It is expressly recognized by Purchaser that Seller may be compelled to make necessary alterations, repairs or extensions of new or additional water transporting facilities from time to time during the life of this contract and any suspension of delivery to Purchaser due to such operation shall not be cause for claim of damage on part of Seller provided all reasonable effort is used by Seller to provide Purchaser with water in accordance with this contract. In such case Seller shall give Purchaser as much advance notice as may be practicable of the suspension of delivery and of the estimated duration thereof.

4. That the provisions of this contract pertaining to the schedule of rates to be paid by the Purchaser for water delivered are subject to modification at the end of every one (1) year period. Any increase or decrease in rates shall be based on a demonstrable increase or decrease in the costs of performance hereunder, but such costs shall not include increased capitalization of the Seller's system, except as act out in this

agreement. In no event shall Purchaser's rate be less than the unit cost for minimum payments for the customers designated as member cities of the original Lake Texarkana Water Supply Corporation. Other provisions of this contract may be modified or altered by mutual agreement.

5. That this contract is subject to such rules, regulations, or laws as may be applicable to similar agreements in this State and the Seller and Purchaser will collaborate in obtaining such permits, certificates, or the like, as may be required to comply herewith.

6. That the Purchaser shall not enter into any contracts for the wholesale supply, or resale, of water supplied by the Seller to any other entity or agency or provide service outside its corporate limits without first having received approval, in writing, from the Seller.

7. That in the event of any occurrence rendering the Purchaser incapable of performing under this contract, any successor of the Purchaser, whether the result of legal process, assignment or otherwise, shall succeed to the rights of the Purchaser hereunder.

8. In the event any sales or use taxes, or taxes of any similar nature are hereafter imposed upon the gathering, taking, sale, use or consumption of the water received by Purchaser under this contract, the amount of such taxes shall be borne by Purchaser, in addition to all other charges, and whenever Seller shall be required to pay, collect, or remit any such taxes on water received by Purchaser, then Purchaser shall promptly reimburse Seller therefor.

9. In the event of an extended shortage of water or the supply of water available to the Seller is otherwise diminished over an extended period of time, the supply of water to Purchaser's consumers shall be reduced or diminished in the same ratio or proportion as the supply to Seller's customers is reduced or diminished.

IN WITNESS WHEREOF, the parties hereto, acting under authority of their respective governing bodies, have caused this contract to be duly executed in several counterparts, each of which shall constitute an original, all as of the day and year first above written.

CITY OF TEXARKANA, TEXAS

By _____
City Manager

ATTEST:

_____
City Secretary

(Seal)

CITY OF NASH, TEXAS

By _____
Mayor

ATTEST:

_____
Secretary

(Seal)

APPROVED AS TO LEGALITY AND FORM:

_____
PAUL B. HIGGINS, City Attorney

AMENDMENT TO WATER PURCHASE CONTRACT

THIS Contract is made and entered into this 27th day of April, 2009, by and between the City of Texarkana, Texas, a municipality within Bowie County, Texas, hereinafter referred to as "Seller" and the City of Nash, Texas of BOWIE COUNTY, TEXAS, hereinafter referred to as "Purchaser".

WITNESSETH:

WHEREAS, the Seller is fully empowered to enter into contracts with other cities for the purpose of selling water for municipal, domestic, industrial, and other useful purposes permitted by law and upon such terms and for such time as the parties may agree; and,

WHEREAS, the aforementioned parties entered into a Water Purchase Contract on the 14th day of June, 1980; which was last amended on the 28th day of January, 2008; and

WHEREAS, by Ordinance No. 37-09 enacted on the 27th day of April, 2009, by the Seller, the sale of water to the Purchaser in accordance with the provisions of said Ordinance was approved, and the execution of this Amendment carrying out the said Ordinance by the City Manager, and attested by the Secretary, was duly authorized; and,

WHEREAS, by Resolution of the City Council of the Purchaser, enacted on the 11th day of May, 2009, the purchase of water from the Seller in accordance with the terms set forth in the said Resolution was approved, and the execution of this Amendment by the Mayor and attested by the Secretary, was duly authorized.

NOW THEREFORE, in accordance with paragraph C. 4 of the original contract, and in consideration of the foregoing, Seller and Purchaser agree to the following modifications to the aforementioned contract;

Paragraph B.1.a and Paragraph B.1.b are amended to read as follows:

B. THE PURCHASER AGREES:

1. To pay the Seller, not later than the 15th day of each month for water delivered in accordance with the following schedule of rates:

   a. $5,920.00 for the first 4,000,000 gallons, which amount shall also be the minimum rate per month.

   b. $1.48 per 1,000 gallons for water in excess of 4,000,000 gallons per month.

The foregoing Amendment shall be attached to and become a part of the original Contract and shall become effective on the 19th day of June, 2009.

All other provisions of the aforementioned Contract shall remain in full force and effect.

IN WITNESS WHEREOF, the Parties hereto, acting under authority of their respective governing bodies, have caused this Contract Amendment to be duly executed in several counterparts, each of which shall constitute an original, all as of the day and the year first above written.

CITY OF TEXARKANA, TEXAS

By _____

CEO/City Manager

ATTEST:

_____

City Secretary

CITY OF NASH, TEXAS

By _____

~~Mayor~~ City Administrator

ATTEST:

_____

Secretary

pjw/mydocs/contracts
April 2009

WATER PURCHASE CONTRACT

This contract for the sale and purchase of water is entered into as of the 7th day of March, 1978, between the City of Texarkana, Texas, Municipal Building, 3rd and Texas, Texarkana, Texas, 75501, hereinafter referred to as the "Seller" and the REDWATER WATER SUPPLY CORPORATION of Bowie County, Texas, hereinafter referred to as the "Purchaser",

WITNESSETH:

WHEREAS, the Seller is fully empowered to enter into contracts with other cities for the purpose of selling water for municipal, domestic, industrial, and other useful purposes permitted by law and upon such terms and for such time as the parties may agree; and

WHEREAS, the Seller owns and operates a water treatment and supply system (hereinafter referred to as "System")capable of providing an adequate water supply for the foreseeable future to the Purchaser, and

WHEREAS, the Purchaser has a need for such water supply and desires to enter into a contractual arrangement with the Seller for water from said System, and

WHEREAS, by Resolution No._____ enacted on the_____day of _____, 19____, by the Seller, the sale of water to the Purchaser in accordance with the provisions of the said Resolution was approved, and the execution of this contract carrying out the said Resolution by the City Manager, and attested by the Secretary, was duly authorized, and

WHEREAS, by Resolution of the Board of Directors of the Purchaser, enacted on the 7 day of March, 1978 the purchase of water from the Seller in accordance with terms set forth in the said Resolution was approved, and the execution of this contract by the Chairman and attested by the Secretary was duly authorized;

NOW, THEREFORE, in consideration of the foregoing and the mutual agreements hereinafter set forth,

A. The Seller Agrees:

1. To furnish the Purchaser at the point of delivery hereinafter specified, during the term of this contract or any renewal

or extension thereof, potable treated water as may be required by the Purchaser not to exceed 1.5 million gallons per month. Water delivered under this contract shall be of the same quality as that distributed by Seller to its own consumers and customers. Futhermore, Seller agrees to operate the treatment and transmission facilities insuch manner as will assure the approval of the Health Department of the State of Texas. If in the future it is agreed by both parties that a larger quantity of water will be delivered, any improvements required shall be at the expense of the Purchaser.

2. That water will be furnished at the normal operating pressure developed for economical operation of the Seller's system but not less than 20 P.S.I. from an existing Six Inch main on the south side of Highway 82 at Tri-State Road approximately 7.5 miles west of Texarkana, Texas.

3. To allow the Purchaser to connect to the Seller's system in such a manner and with such materials as is required by the State and by the Seller; said materials up to the point of delivery to become the property of the Seller as a part of the System. This includes all monitoring, control, transmission, metering and attendant facilities and devices to provide water into the Purchaser's system, being done with the Seller's supervision and approval and at the Purchaser's expense.

4. That due to the urgent need for water supply to the Purchaser's customers, to allow the Purchaser to install, at Purchaser's expense and on a temporary basis, a backflow preventer in lieu of the ground storage normally required of wholesale purchasers. Said backflow preventer will be replaced by a ground storage facility (including chlorinators, pumps and other attendant facilities) of adequate capacity to serve the Purchaser's customers and to allow the required air break into said ground storage.

5. That due to the Purchaser's funding capability, the above referenced ground storage facility will be installed as soon as is economically feasible with an anticipated date of construction completion not later than January 1, 1980.

6. To furnish the Purchaser at the above address not later than the 5th day of the month, with an itemized statement of the amount of water furnished the Purchaser during the preceding month. The quantity of water for which Purchaser shall be billed shall be based upon the reading of the master meter of the Seller except under conditions set out in Section A-7. The unit of measure for water delivered hereunder shall be 1,000 gallons of water, U. S. Standard Liquid Measure.

7. Seller shall maintain and calibrate (or arrange for calibration of) its metering equipment as often as it considers necessary or such time as Purchaser may show reasonable evidence of error. If, upon any test, the percentage of any inaccuracy thereof is found to be in excess of 2%, registration thereof shall be corrected for a period extending back to the time such inaccuracy began, if such time is ascertainable, and if not, then for a period extending back one-half of the time elapsed since the last date of calibration, but in no event further back than a period of six (6) months. In the event Purchaser has provided no check meter with reference thereto and if for any reason any master meter is out of service or out of repair so that the amount of water delivered cannot be ascertained or computed from the reading thereof, the water delivered during the period such meter is out of service or out of repair shall be agreed upon by the parties hereto, by correcting the error if the percentage of error is ascertainable by calibration tests or mathematical calculations, or by estimating the quantity of water by the deliveries made during preceding periods under similar conditions when the meter was registering accurately, or from the pumpage records of the Seller and other customers on the same supply line.

B. The Purchaser Agrees:

1. To pay the Seller, not later than the 15th day of each month, for water delivered in accordance with the following schedule of rates:

a. $262.50 for the first 750,000 gallons, which amount shall also be the minimum rate per month.

b. $0.35 per 1000 gallons for water in excess of 750,000 gallons per month.

Should Purchaser fail to make any payments at the times herein specified, interest on such amounts shall accrue at the rate of ten per cent (10%) per month from the date such payment becomes due until paid in full with interest as herein specified. In the event such payment is not made within sixty (60) days from the date such payment becomes due, Seller may, at its option, discontinue delivery of water to Purchaser until the amount due Seller is paid in full including collection fees.

2. Title to all water supplied under this agreement shall remain in Seller to the point of delivery, and upon passing through the meter installed at that point, title to the water shall pass to Purchaser. Each party hereto agrees to save and hold the other harmless from all claims, demands and causes of action which may be asserted by anyone on account of the transportation, delivery and disposal of said water while title remains in such party.

3. That Seller is hereby authorized to enter onto any of Purchaser's properties, whether held in fee simple or by easement, wherein there is reasonable need to operate and/or maintain Seller's facilities located on Purchaser's properties, whether for the present system or for any mutually agreed upon future facilities.

4. That at such time as the Purchaser constructs the ground storage facility, to move the Seller's metering facilities, at Purchaser's expense, onto the Purchaser's property adjacent to said ground storage and to provide the normal security of said area.

5. Seller's meter shall be of the type required by the City of Texarkana. Purchaser shall pay all costs of connections and meter required in obtaining water purchased. Purchaser's plans and specifications for facilities between the point of connection to Seller's line and Purchaser's storage facility shall be approved by Seller, when such storage facilities are constructed.

6. Purchaser further agrees to fix and collect such rates and charges for water services to its customers as will, in combinati with any other funds legally available and reasonably assured for the purpose, make possible the prompt payment of all expenses of operating and maintaining its Water System and all payments contracte hereunder.

7. Purchaser represents and covenants that all payments to be made hereunder shall constitute "operating expenses" of its Waterworks System with the effect that the obligation to make such payments from its Waterworks revenues under this contract shall be an operating expense as defined by Article 1113 of the Revised Civil Statutes of Texas, 1925, as amended.

C. It is further mutually agreed between the Seller and the Purchaser:

1. That this contract shall extend for a term of thirty (30) years from the date of the initial delivery of any water as shown by the first bill submitted by the Seller to the Purchaser and, thereafter may be renewed or extended for such term, or terms, as may be agreed upon by the Seller and Purchaser.

2. That ten (10) days prior to the estimated date of completion of construction of the Purchaser's water supply distribution system, the Purchaser will notify the Seller in writing the date for the initial delivery of water.

3, When requested by the Purchaser the Seller will make available to the contractor at the point of delivery, or other point reasonably close thereto, water sufficient for testing and flushing the system of the Purchaser during construction, for which the contractor shall pay a flat fee of $100.00 if metering equipment has not be installed, or $0.35 per 1000 gallons if metering equipment has been installed.

4. Force Majeure

a. If for any reason of "force majeure" either of the parties hereto shall be rendered unable wholly or in part to carry out its obligation under this agreement, other than the obligation of Purchaser to make the payments required under the terms of Section B-1 hereof, then if such party shall give notice and full particulars of such reasons in writing to the other party within a reasonable time after the occurrence of the event, or cause relied on, the obligation of the party giving such notice, so far as it is affected by such "force majeure", shall be suspended during the continuance of the inability then claimed, but for no longer period, and any such parties shall endeavor to remove or overcome such inability with all reasonable dispatch. The term "force majeure" as employed herein shall mean acts of God, strikes, lock-outs, or

other industrial disturbances, acts of public enemy, orders or actions of any kind of the Government of the United States or of the State of Texas, or any civil or military authority, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, hurricanes, storms, floods, wash-outs, breakage or accident to dams, machinery, pipelines, or canals or other structures or machinery, partial or entire failure of water supply and inability on the part of Seller to deliver water hereunder, or of Purchaser to receive water, on account of any other cause not reasonably within the control of the party claiming such inability. It is understood and agreed that the settlement of strikes and lock-outs shall be entirely within the discretion of the party having the difficulty, and that the above requirement that any force majeure shall be remedied with all reasonable dispatch shall not require the settlement of strikes and lock-outs by acceding to the demands of the opposing parties when such settlement is unfavorable to it in the judgment of the party having the difficulty. No failure of Seller to meet any obligation by reason of force majeure shall relieve Purchaser from its obligations to make the payments required under the terms of Section B-1 hereof.

b. No damage shall be recoverable from Seller by reason of the suspension of delivery of water due to any of the causes above mentioned. If Seller's ability to deliver water to Purchaser is affected by any of such causes, Seller shall promptly notify Purchaser in writing giving the particulars as soon as practicable after the occurrence of the cause or causes for such interruption. If the supply of water available to Seller is insufficient for any reason to serve the requirements of all of its customers, then the available amount of water will be allocated by Seller so as to meet the requirements of its various customers in accordance with their respective needs.

c. It is expressly recognized by Purchaser that Seller may be compelled to make necessary alterations, repairs or extensions of new or additional water transporting facilities from time to time during the life of this contract and any suspension of delivery to Purchaser due to such operation shall not be cause for claim of

damage on part of Seller provided all reasonable effort is used by Seller to provide Purchaser with water in accordance with this contract. In such case Seller shall give Purchaser as much advance notice as may be practicable of the suspension of delivery and of the estimated duration thereof.

5. That the provisions of this contract pertaining to the schedule of rates to be paid by the Purchaser for water delivered are subject to modification at the end of every one (1) year period. Any increase or decrease in rates shall be based on a demonstrable increase or decrease in the costs of performance hereunder, but such costs shall not include increased capitalization of the Seller's system, except as act out in this agreement. In no event shall Purchaser's rate be less than the unit cost for minimum payments for the customers designated as member cities of the original Lake Texarkana Water Supply Corporation. Other provisions of this contract may be modified or altered by mutual agreement.

6. That this contract is subject to such rules, regulations or laws as may be applicable to similar agreements in this State and the Seller and Purchaser will collaborate in obtaining such permits, certificates, or the like, as may be required to comply herewith.

7. That the construction of the water supply distribution system by the Purchaser is being financed by a loan made or insured by, and/or a grant from, the United States of America, acting through the Farmers Home Administration of the United States Department of Agriculture, and the provisions hereof pertaining to the undertakings of the Purchaser are conditioned upon the approval, in writing, of the State Director of the Farmers Home Administration.

8. That in the event of any occurrence rendering the Purchaser incapable of performing under this contract, any successor of the Purchaser, whether the result of legal process, assignment, or otherwise, shall succeed to the rights of the Purchaser hereunder

9. In the event any sales or use taxes, or taxes of any similar nature are hereafter imposed upon the gathering, taking, sale, use or consumption of the water received by Purchaser under this contract, the amount of such taxes shall be borne by Purchaser, in addition to all other charges, and whenever Seller shall be

required to pay, collect, or remit any such taxes on water received by Purchaser, then Purchaser shall promptly reimburse Seller therefor.

10. In the event of an extended shortage of water or the supply of water available to the Seller is otherwise diminished over an extended period of time, the supply of water to Purchaser's consumers shall be reduced or diminished in the same ratio or proportion as the supply to Seller's consumers is reduced or diminished.

IN WITNESS WHEREOF, the parties hereto, acting under authority of their respective governing bodies, have caused this contract to be duly executed in several counterparts, each of which shall constitute an original, all as of the day and year first above written.

CITY OF TEXARKANA, TEXAS

By Stuart A. Zach
City Manager

ATTEST:

Hilda B Talbert
City Secretary

(Seal)

REDWATER WATER SUPPLY CORPORATION

By Willard R. Land
Chairman

ATTEST:

Secretary

(Seal)

AMENDMENT TO WATER PURCHASE CONTRACT

THIS Contract is made and entered into this 27th day of April, 2009, by and between the City of Texarkana, Texas, a municipality within Bowie County, Texas, hereinafter referred to as "Seller" and the City of Redwater, Texas of BOWIE COUNTY, TEXAS, hereinafter referred to as "Purchaser".

WITNESSETH:

WHEREAS, the Seller is fully empowered to enter into contracts with other cities for the purpose of selling water for municipal, domestic, industrial, and other useful purposes permitted by law and upon such terms and for such time as the parties may agree; and,

WHEREAS, the aforementioned parties entered into a Water Purchase Contract on the 7th day of March, 1978; which was last amended on the 28th day of January, 2008; and,

WHEREAS, by Ordinance No. 38-09 enacted on the 27th day of April, 2009, by the Seller, the sale of water to the Purchaser in accordance with the provisions of said Ordinance was approved, and the execution of this Amendment carrying out the said Ordinance by the City Manager, and attested by the Secretary, was duly authorized; and,

WHEREAS, by Resolution of the City Council of the Purchaser, enacted on the 1 day of June, 2009, the purchase of water from the Seller in accordance with the terms set forth in the said Resolution was approved, and the execution of this Amendment by the Mayor and attested by the Secretary, was duly authorized.

NOW THEREFORE, in accordance with paragraph C. 5 of the original contract, and in consideration of the foregoing, Seller and Purchaser agree to the following modifications to the aforementioned contract;

Paragraph B.1.a and Paragraph B.1.b are amended to read as follows:

B. THE PURCHASER AGREES:

1. To pay the Seller, not later than the 15th day of each month, for water delivered in accordance with the following schedule of rates:

   a. $1,110.00 for the first 750,000 gallons, which amount shall also be the minimum rate per month.

   b. $1.48 per 1,000 gallons for water in excess of 750,000 gallons per month.

The foregoing Amendment shall be attached to and become a part of the original Contract and shall become effective on the 7th day of March, 2009.

All other provisions of the aforementioned Contract shall remain in full force and effect.

IN WITNESS WHEREOF, the Parties hereto, acting under authority of their respective governing bodies, have caused this Contract Amendment to be duly executed in several counterparts, each of which shall constitute an original, all as of the day and the year first above written.

CITY OF TEXARKANA, TEXAS

By _____

CEO/City Manager

ATTEST:

_____

City Secretary

CITY OF REDWATER, TEXAS

By _____

Mayor

ATTEST:

_____

Secretary

pjw/mydocs/contracts
April 2009

APPENDIX H

Water Quality Data and Graphs (Millwood & Wright Patman Lakes)

SUSAN ROTH
water and wastewater consulting

Appendix H - Water Quality Data and Graphs

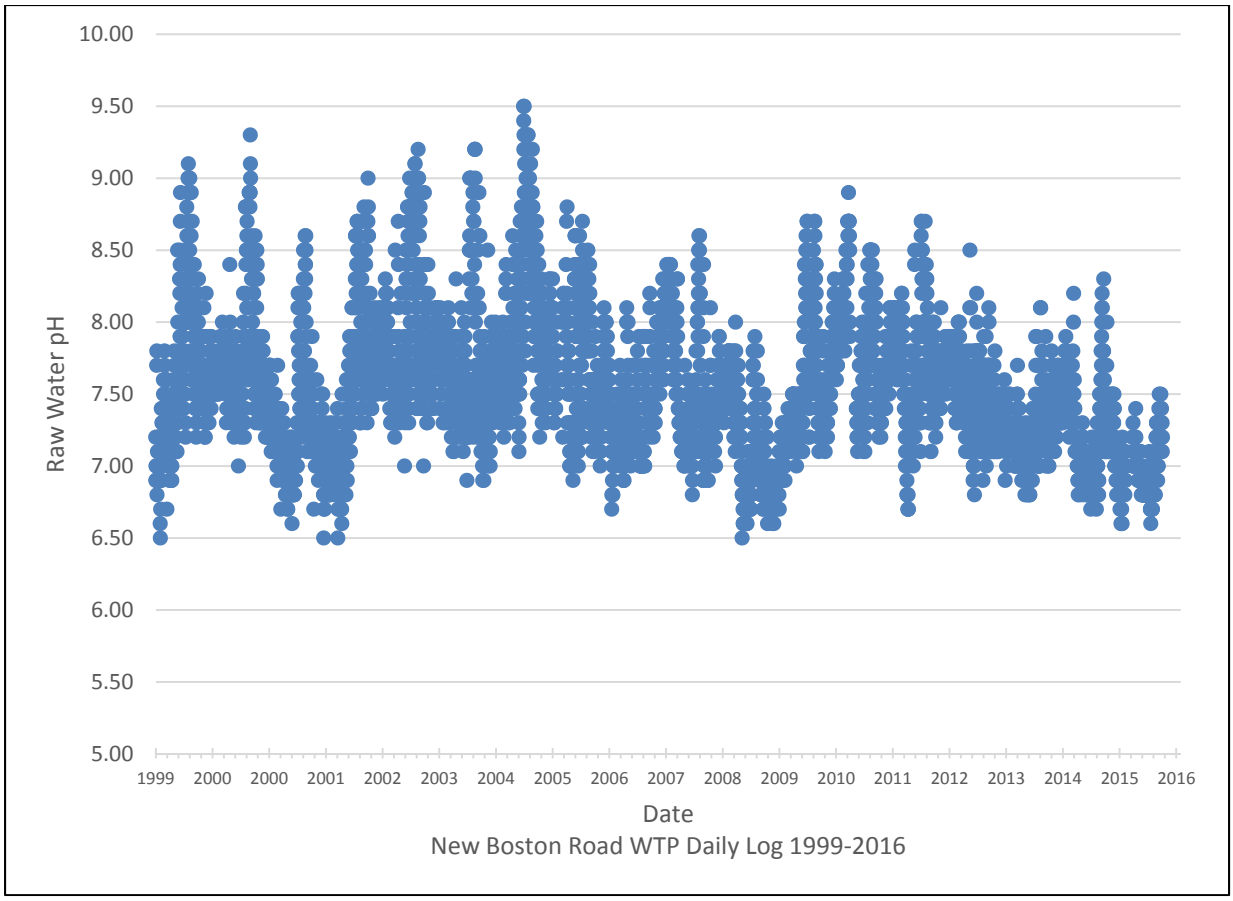


Figure H-1: Historical Distribution of Raw Water pH at New Boston Road WTP

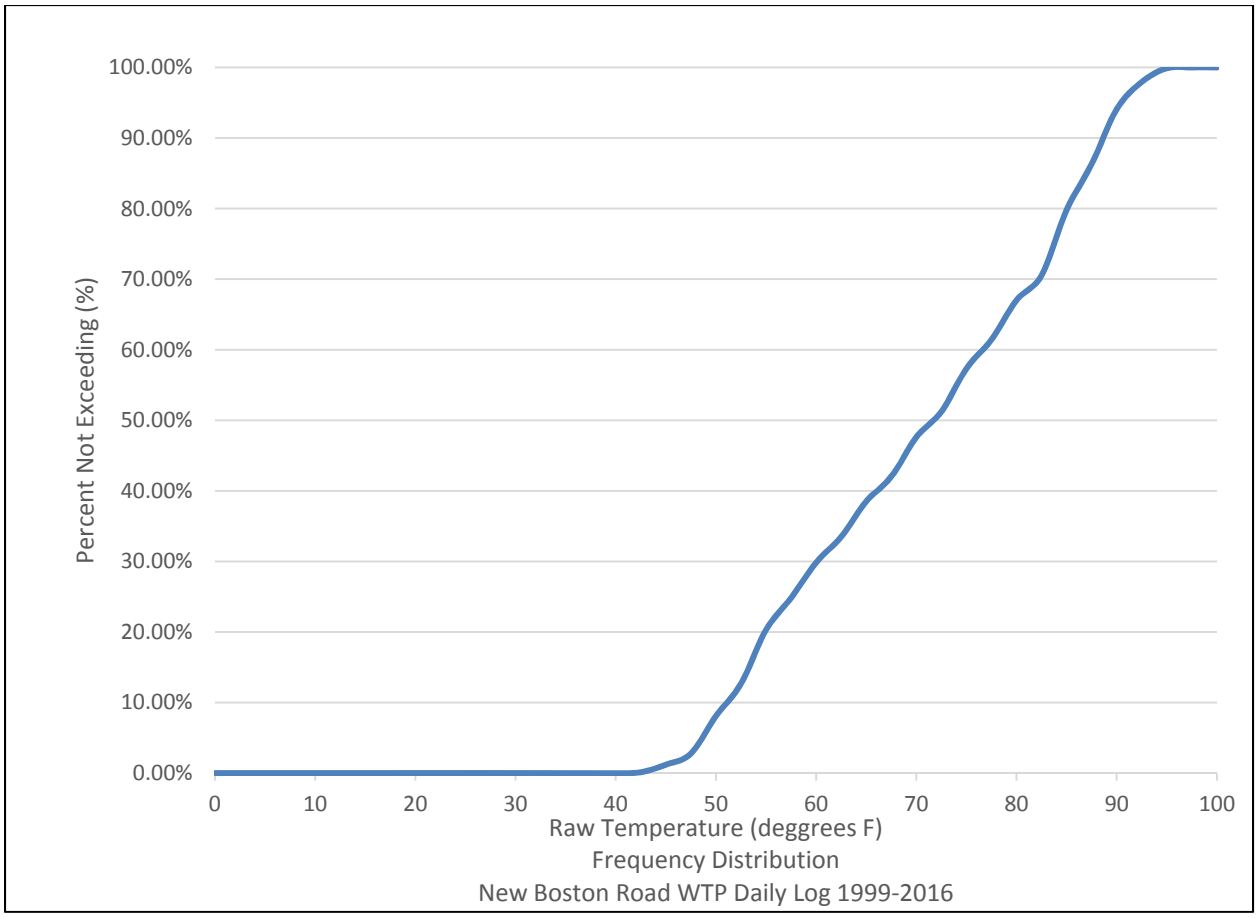


Figure H-2: Frequency Distribution of Raw Water Temperature at New Boston Road WTP

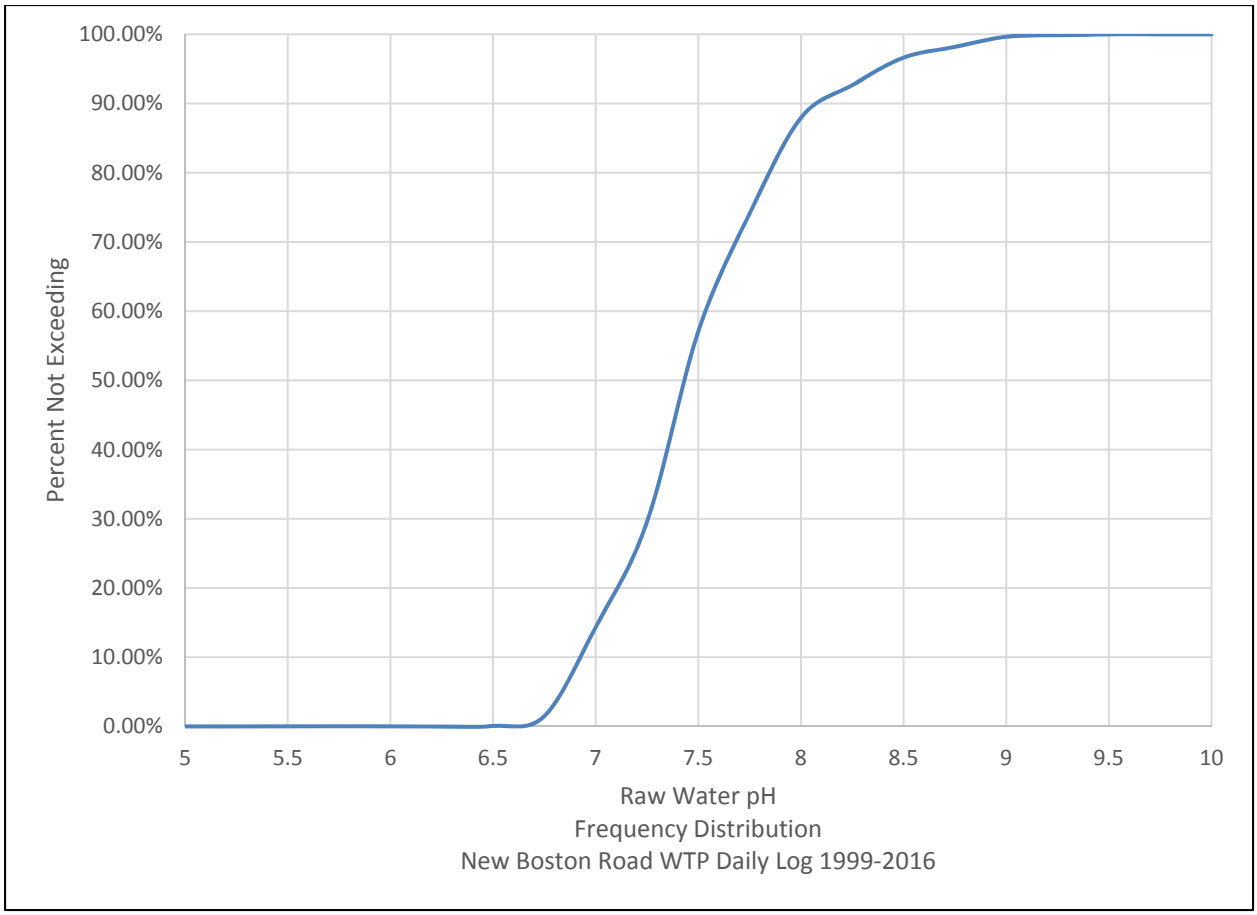


Figure H-3: Frequency Distribution of Raw Water pH at New Boston Road WTP

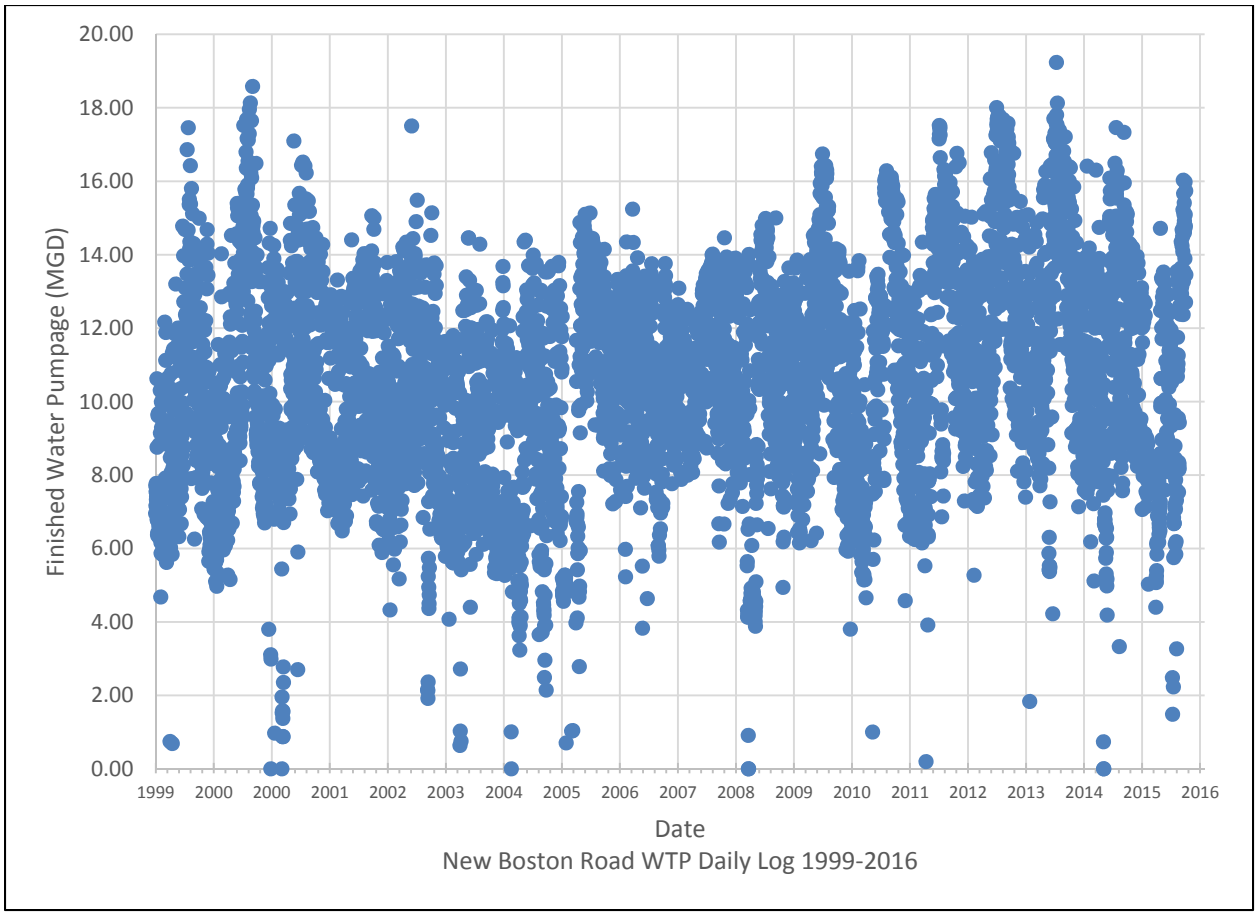


Figure H-4: Historical Distribution of Finished Water Pumpage at New Boston Road WTP

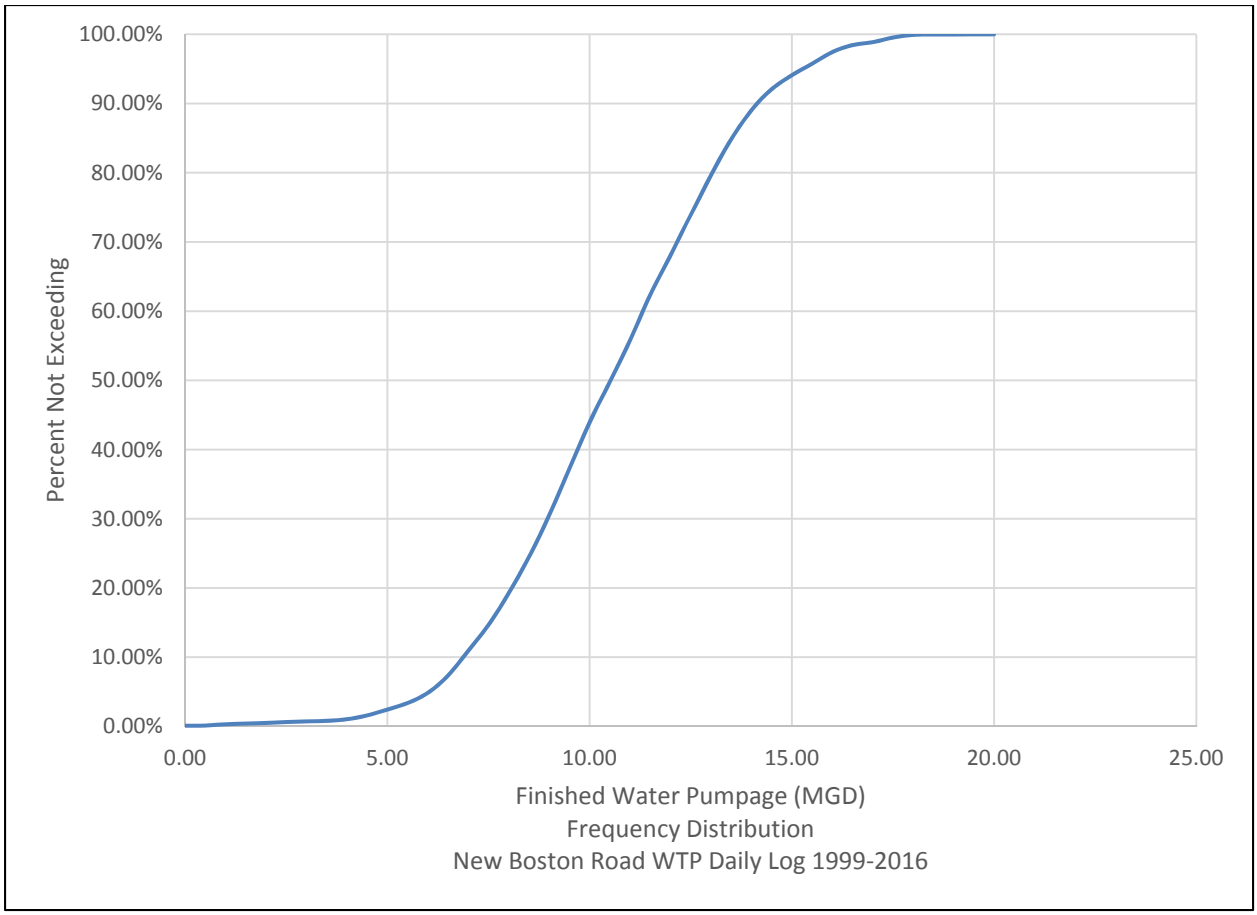


Figure H-5: Frequency Distribution of Finished Water Pumpage at New Boston Road WTP

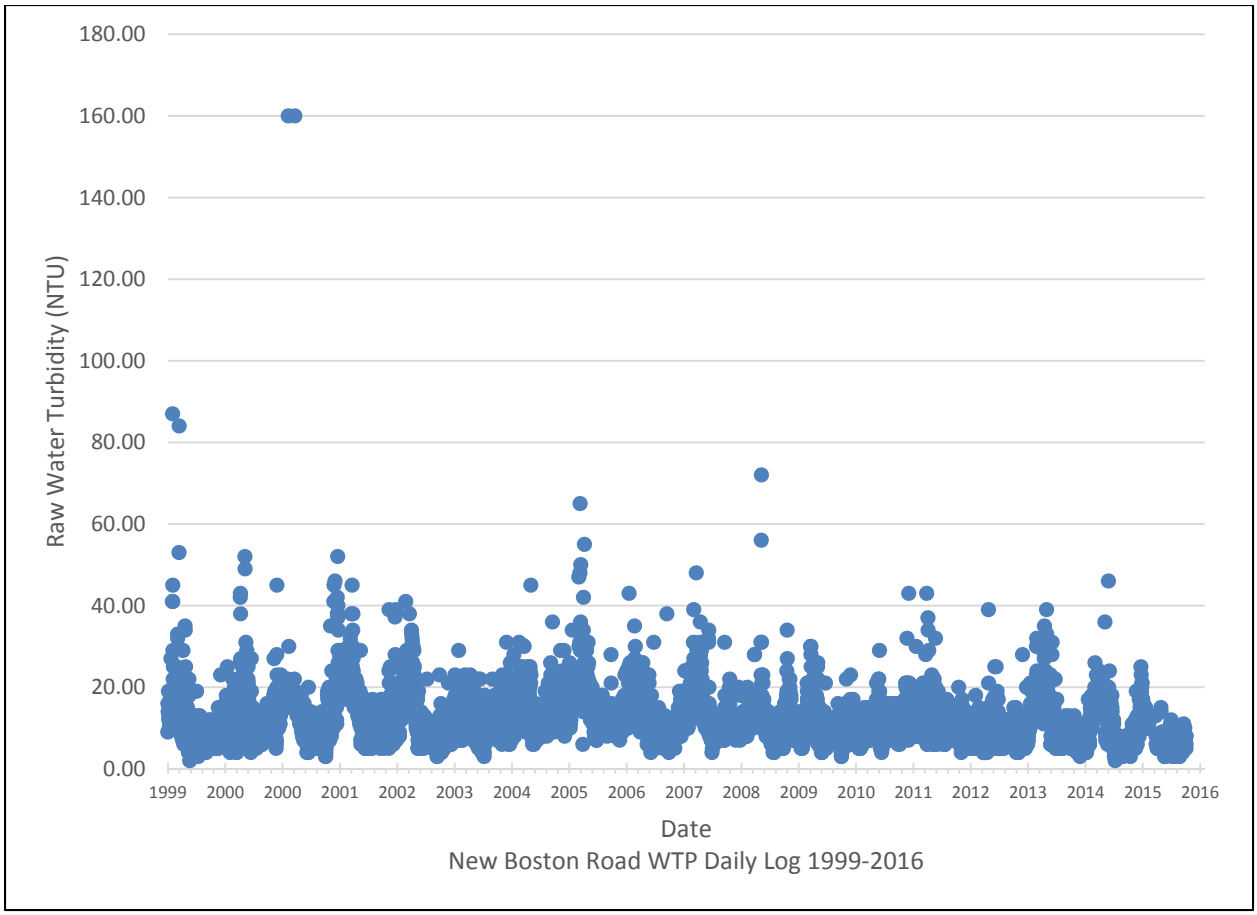


Figure H-6: Historical Distribution of Raw Water Turbidity at New Boston Road WTP

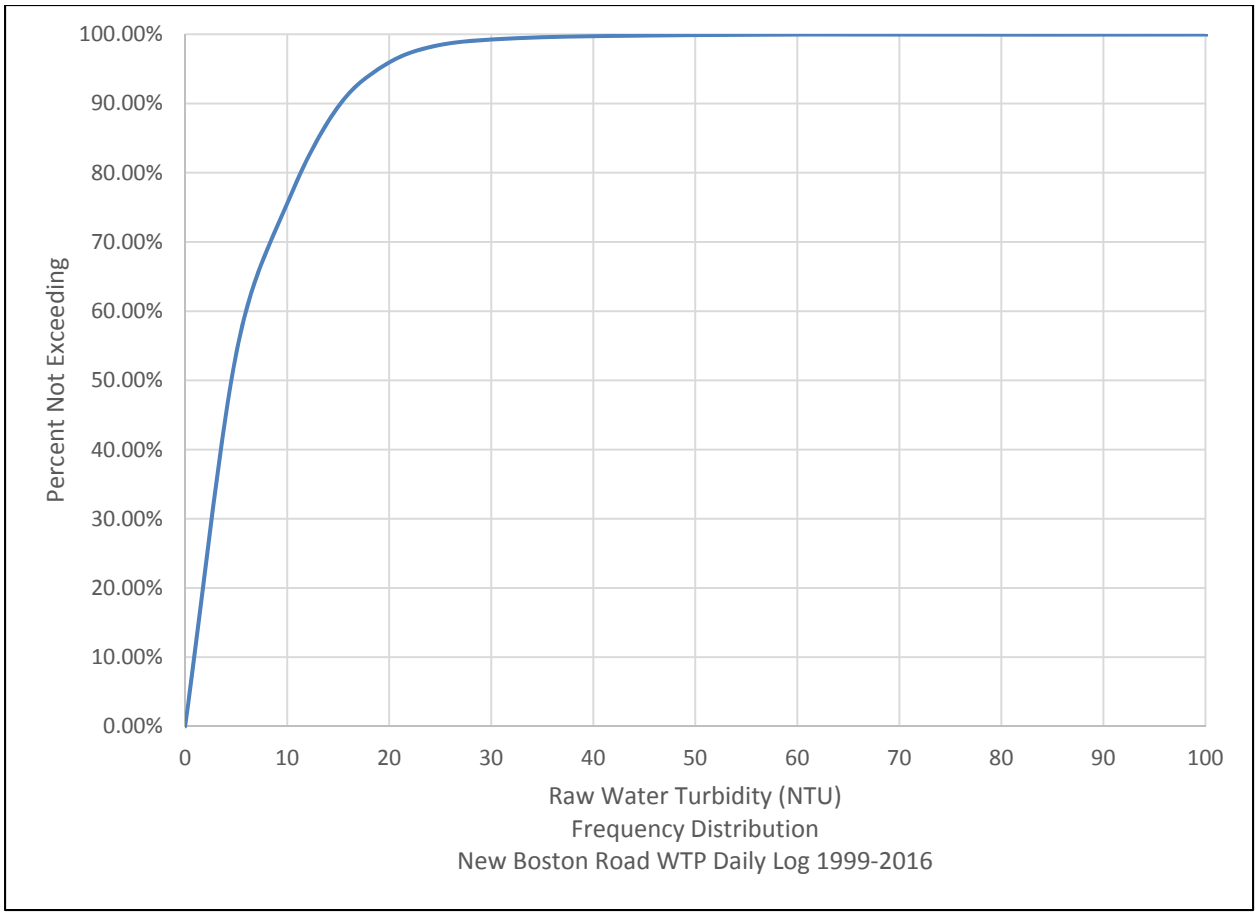


Figure H-7: Frequency Distribution of Raw Water Turbidity at New Boston Road WTP

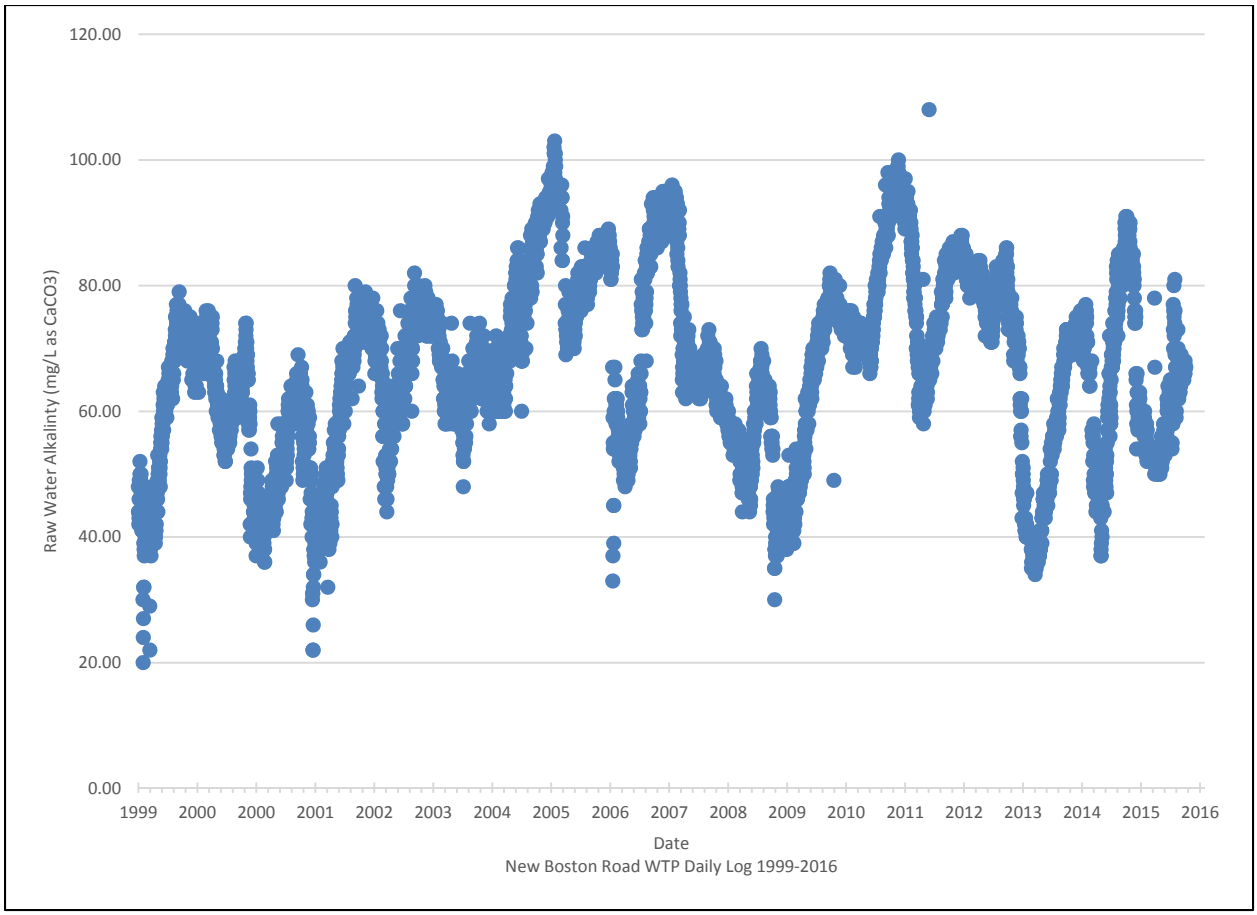


Figure H-8: Historical Distribution of Raw Water Alkalinity at New Boston Road WTP

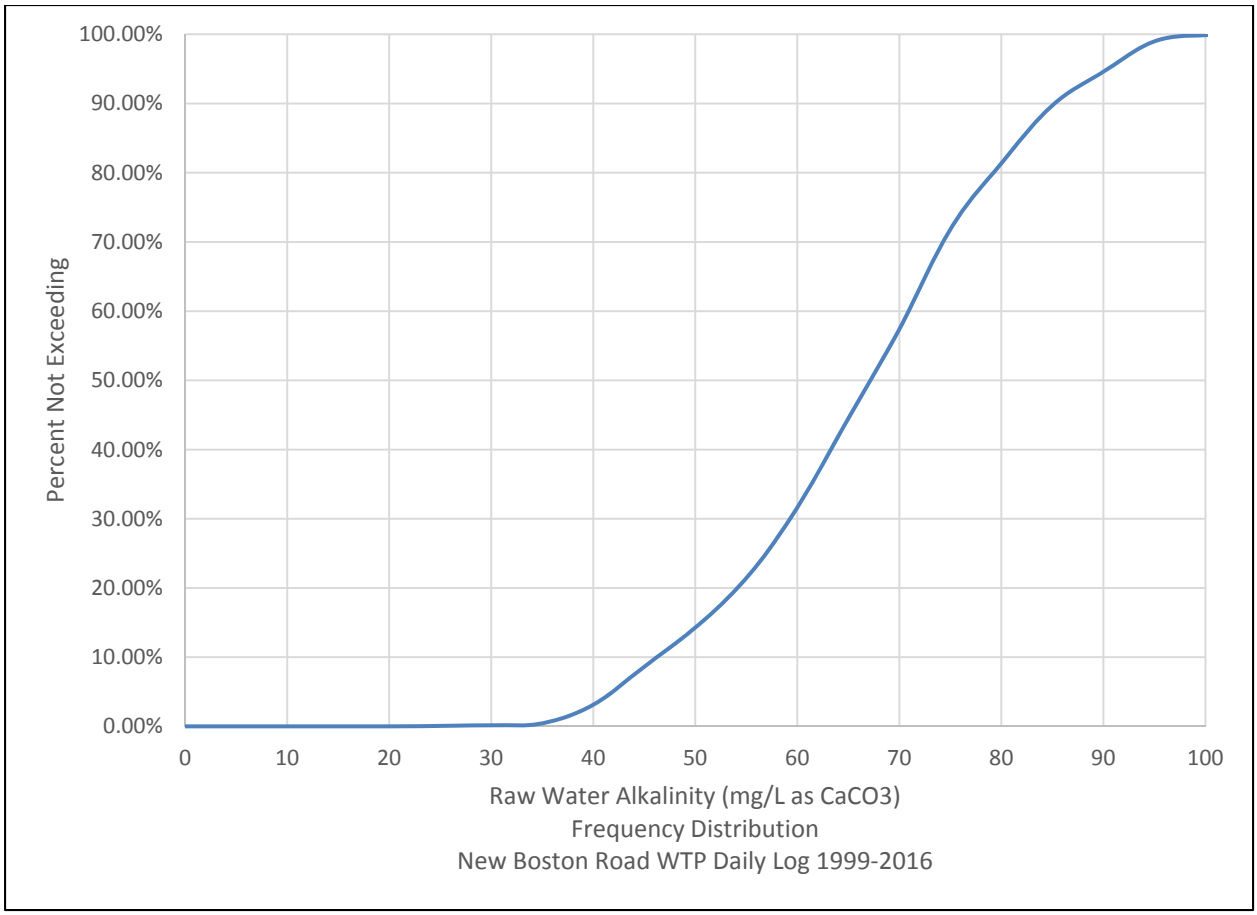


Figure H-9: Frequency Distribution of Raw Water Alkalinity at New Boston Road WTP

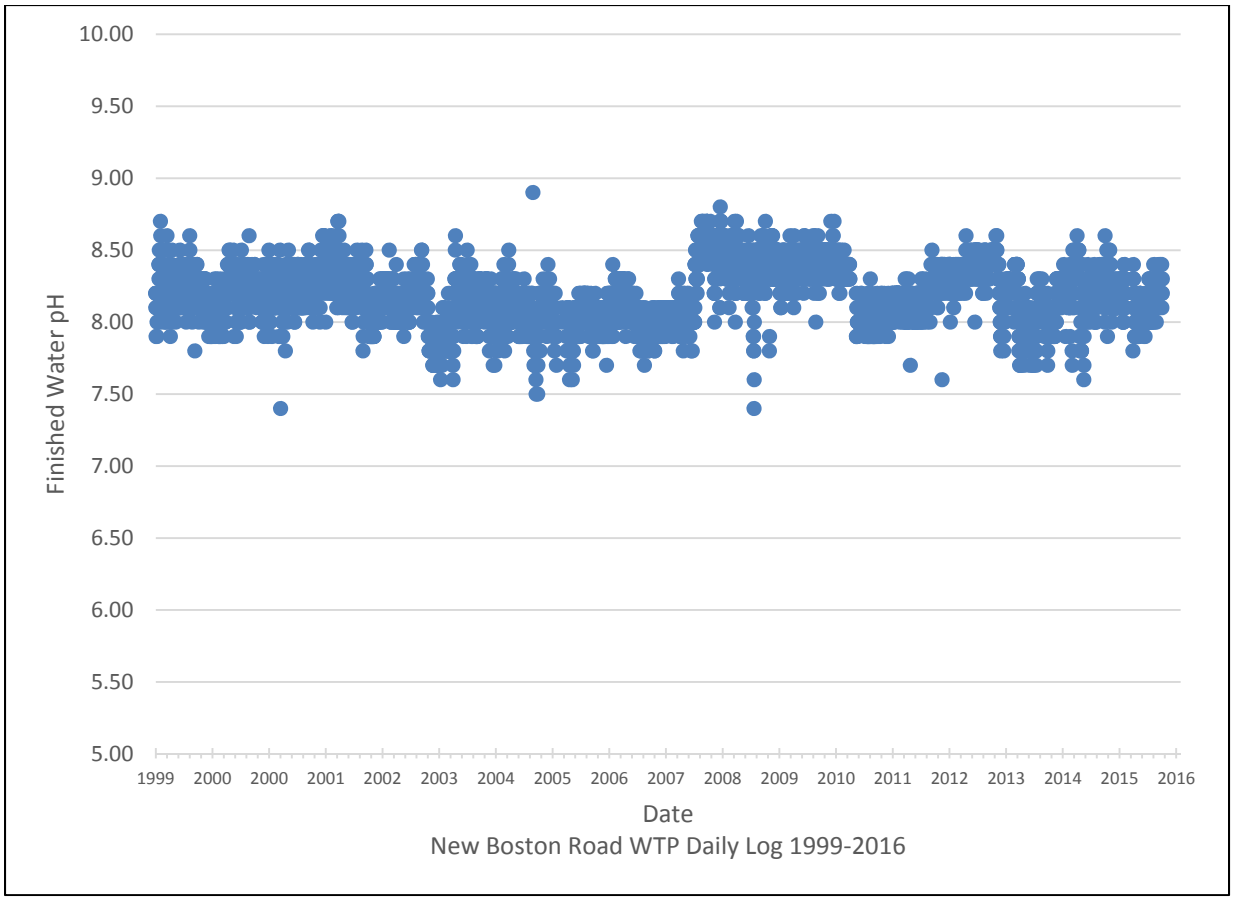


Figure H-10: Historical Distribution of Finished Water pH at New Boston Road WTP

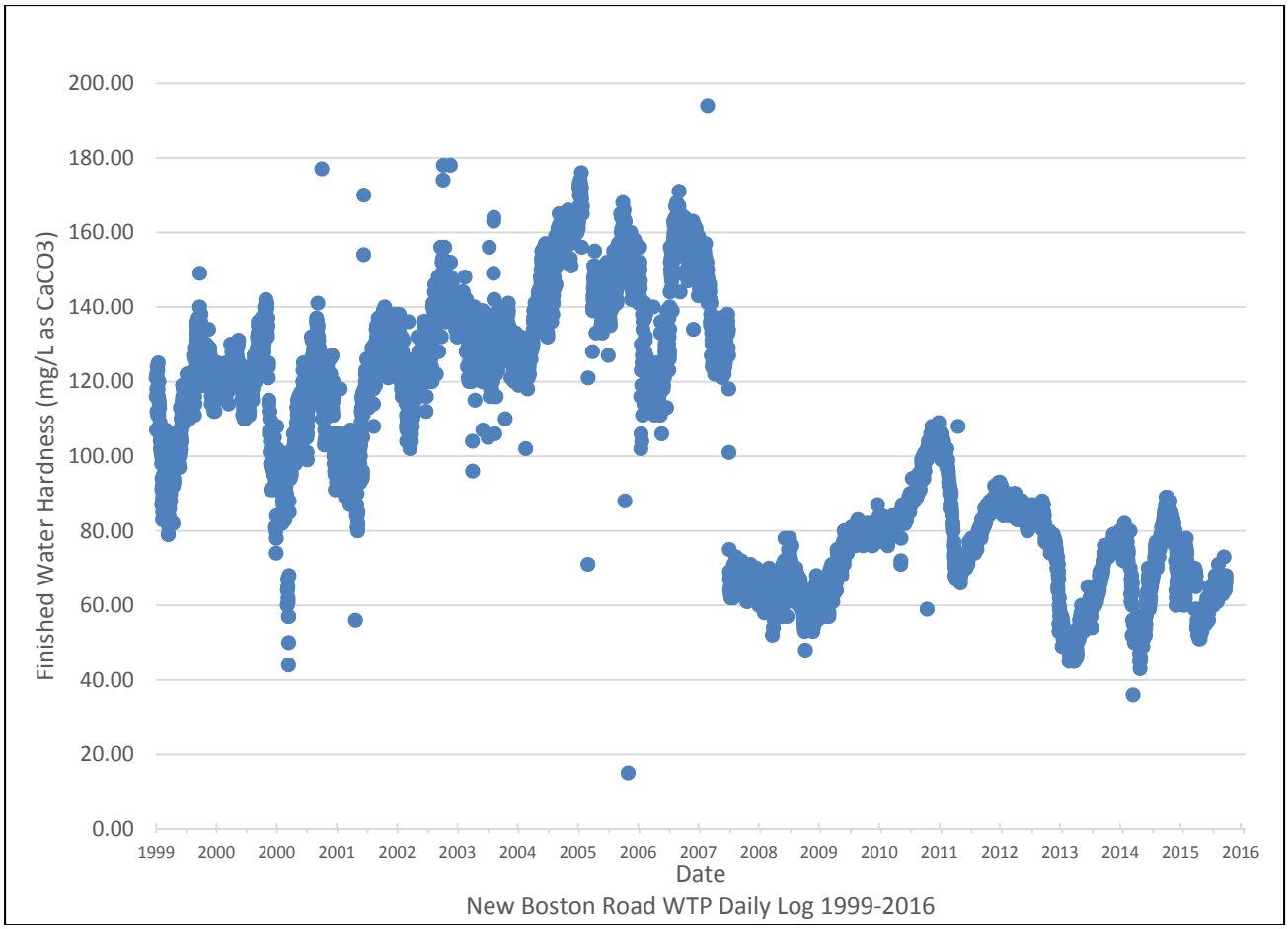


Figure H-11: Historical Distribution of Finished Water Hardness at New Boston Road WTP

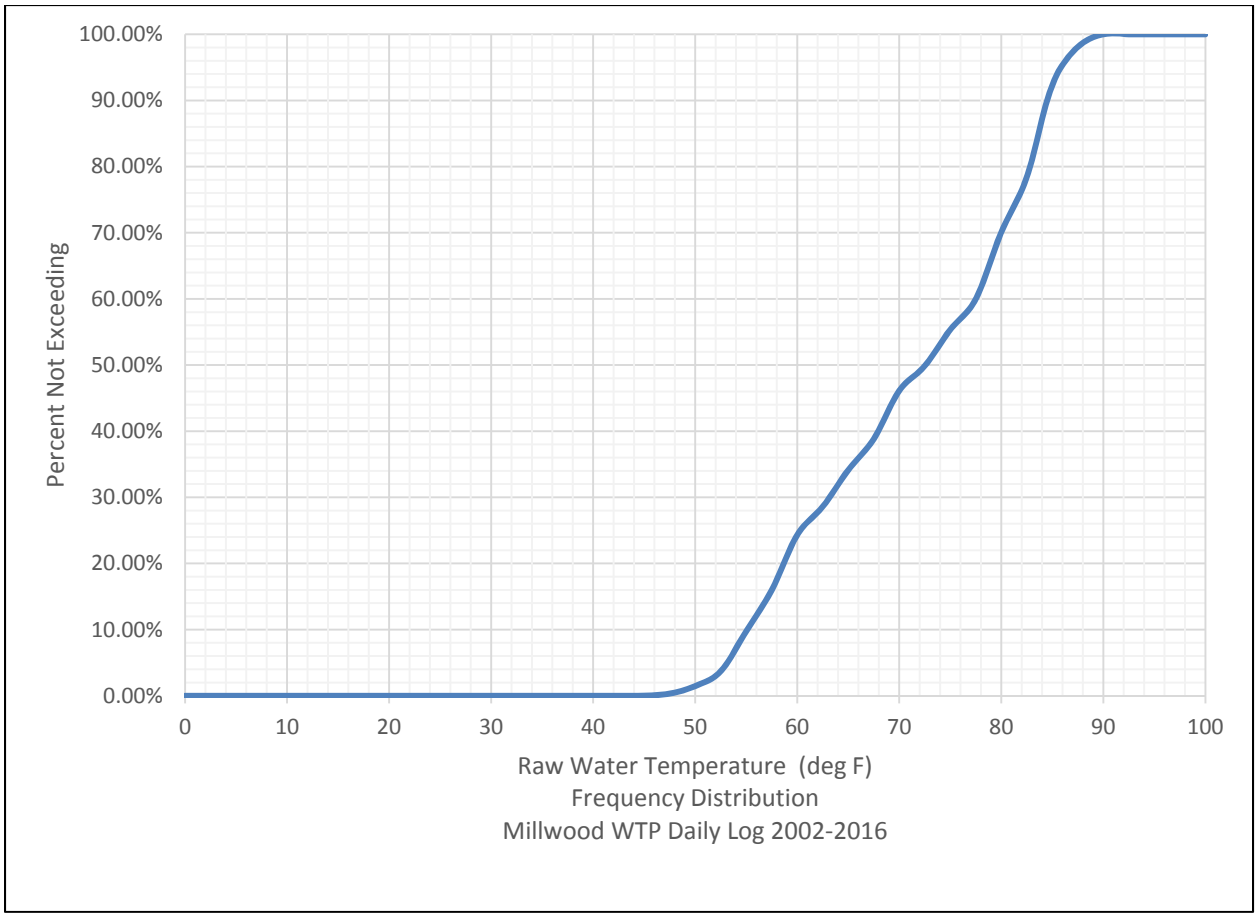


Figure H-12: Frequency Distribution of Raw Water Temperature at Millwood WTP

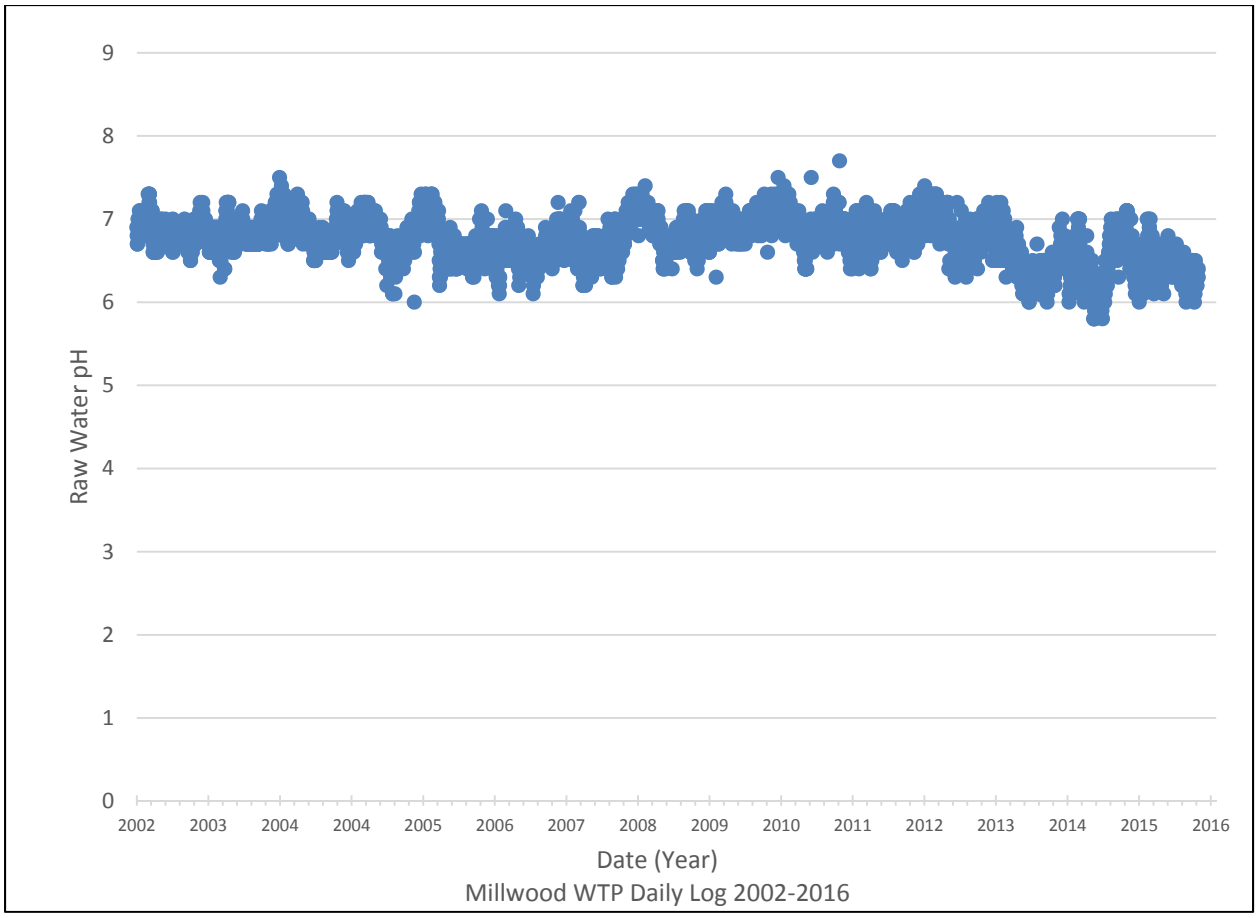


Figure H-13: Historical Distribution of Raw Water pH at Millwood WTP

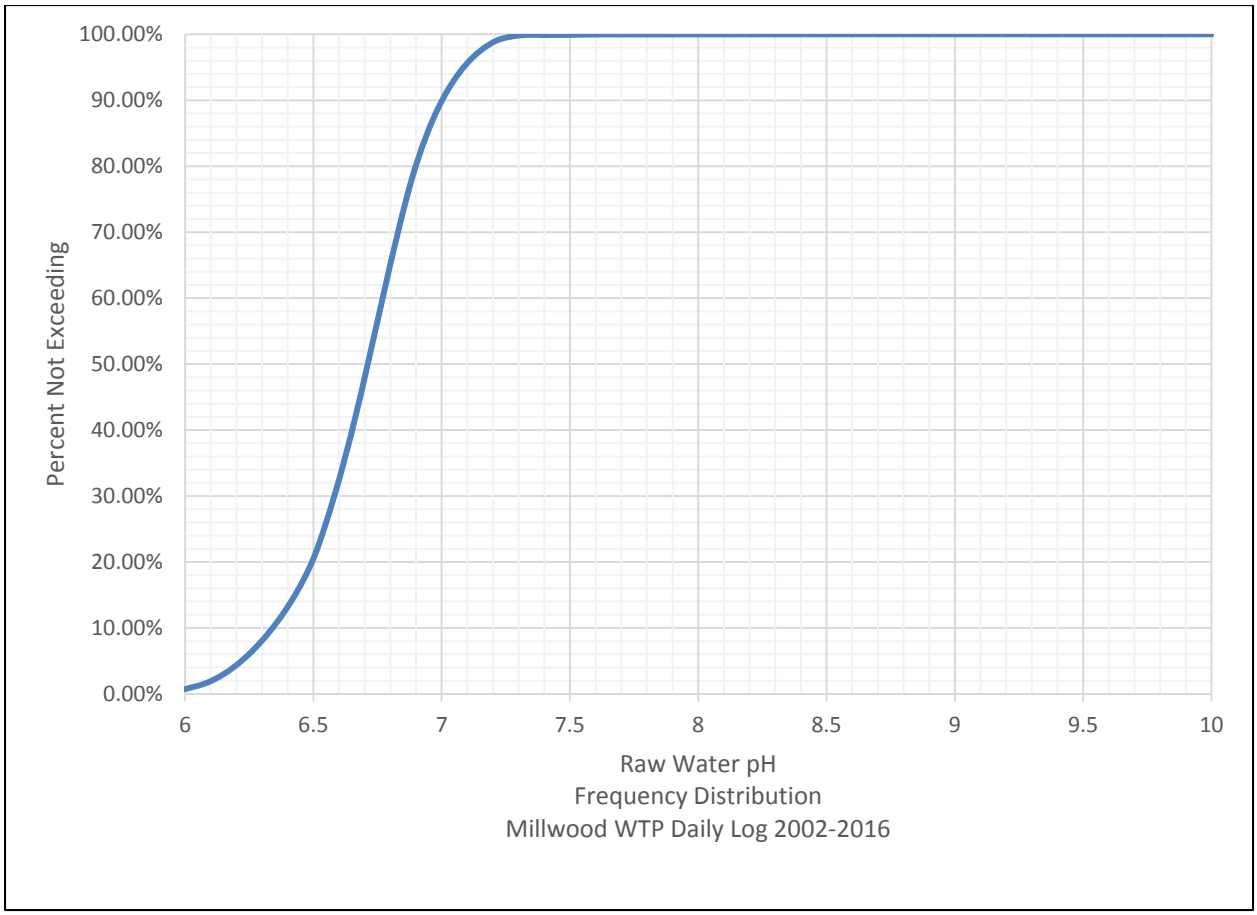


Figure H-14: Frequency Distribution of Raw Water pH at Millwood WTP

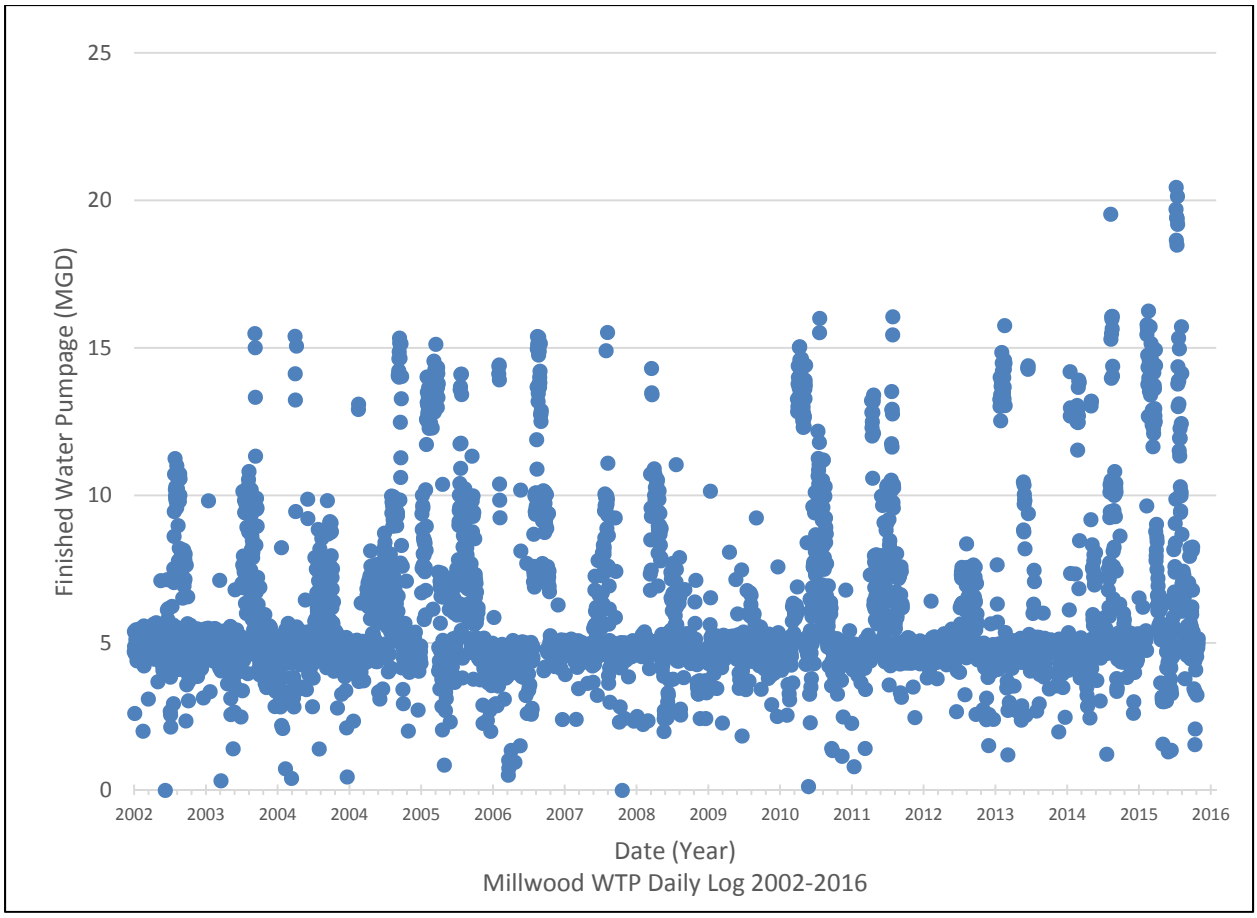


Figure H-15: Historical Distribution of Finished Water Pumpage at Millwood WTP

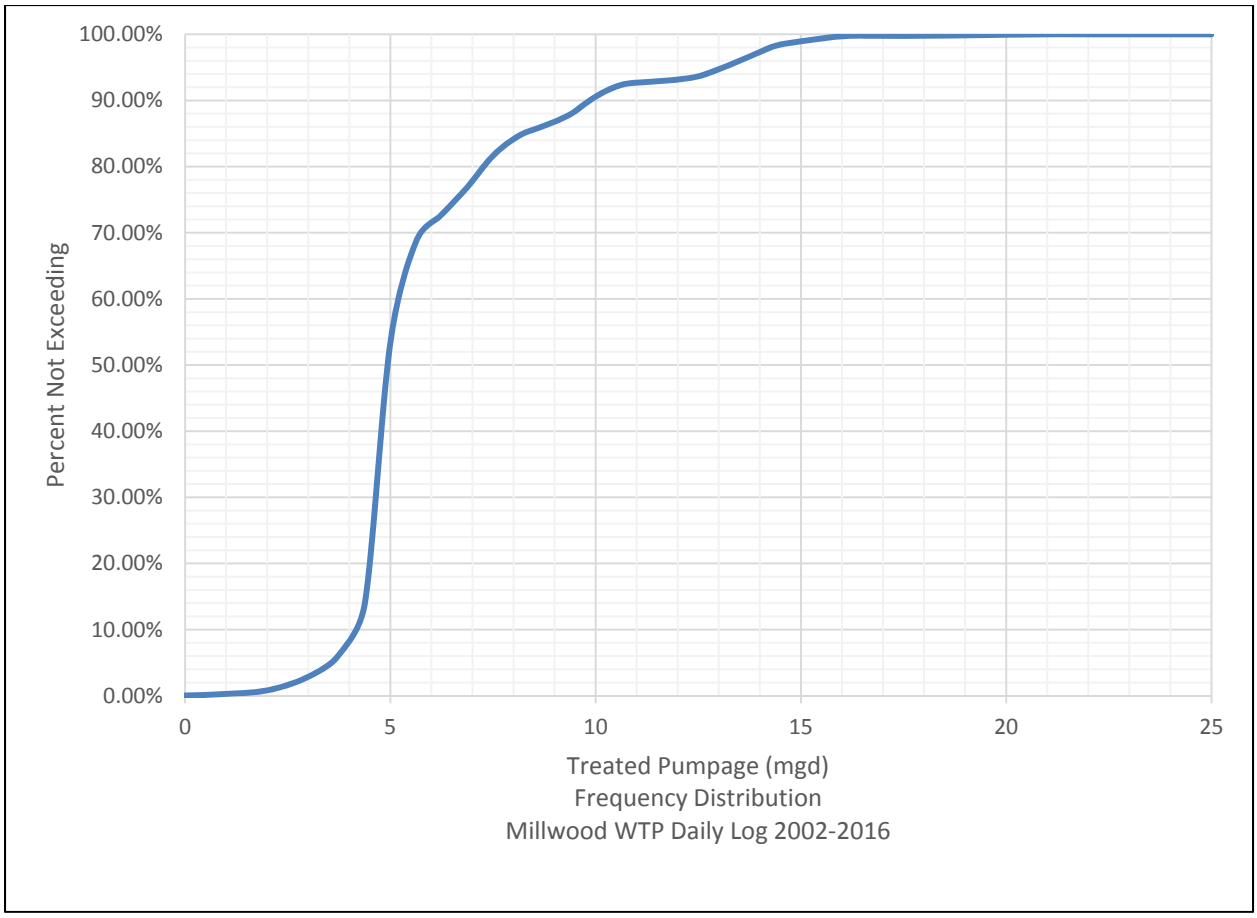


Figure H-16: Frequency Distribution of Treated Water Pumpage at Millwood WTP

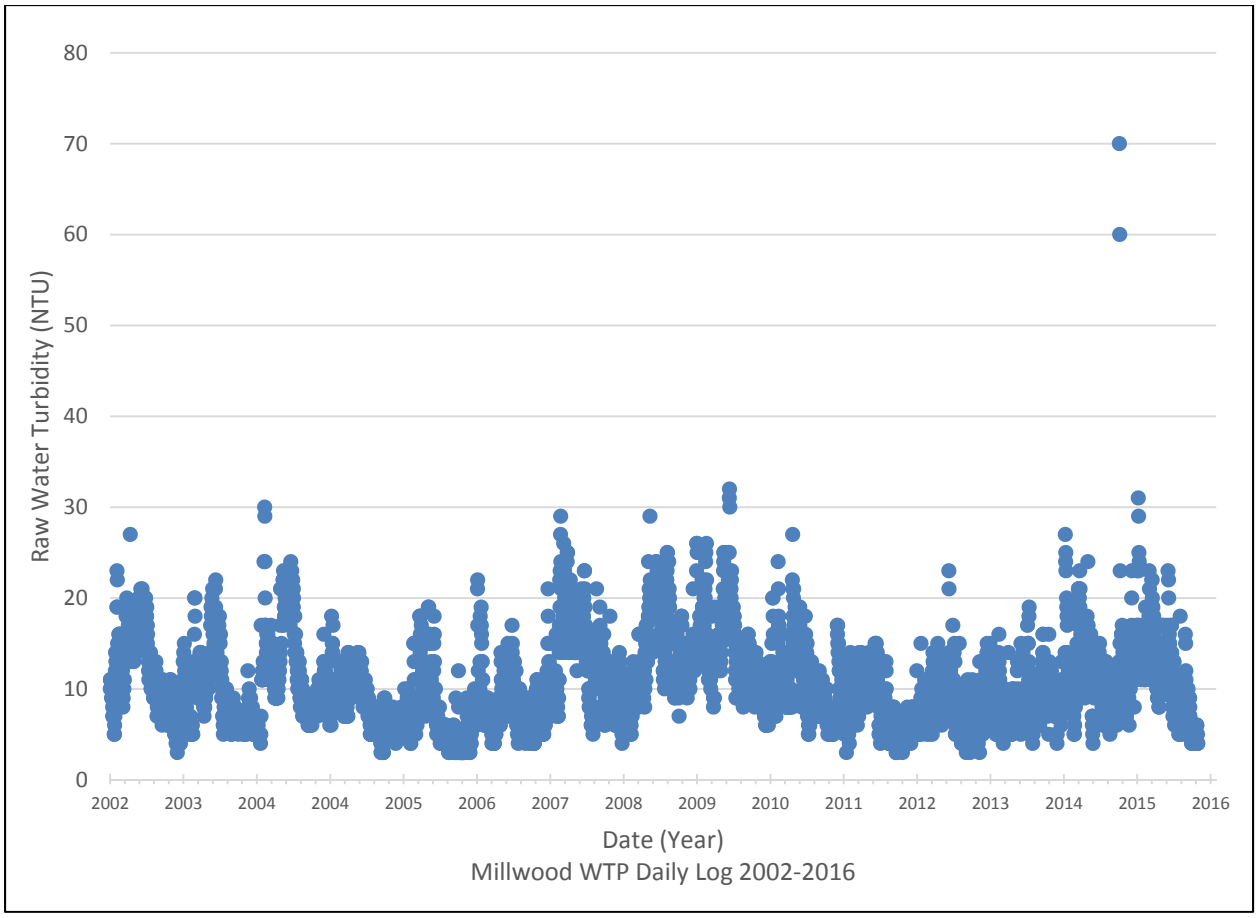


Figure H-17: Historical Distribution of Raw Water Turbidity at Millwood WTP

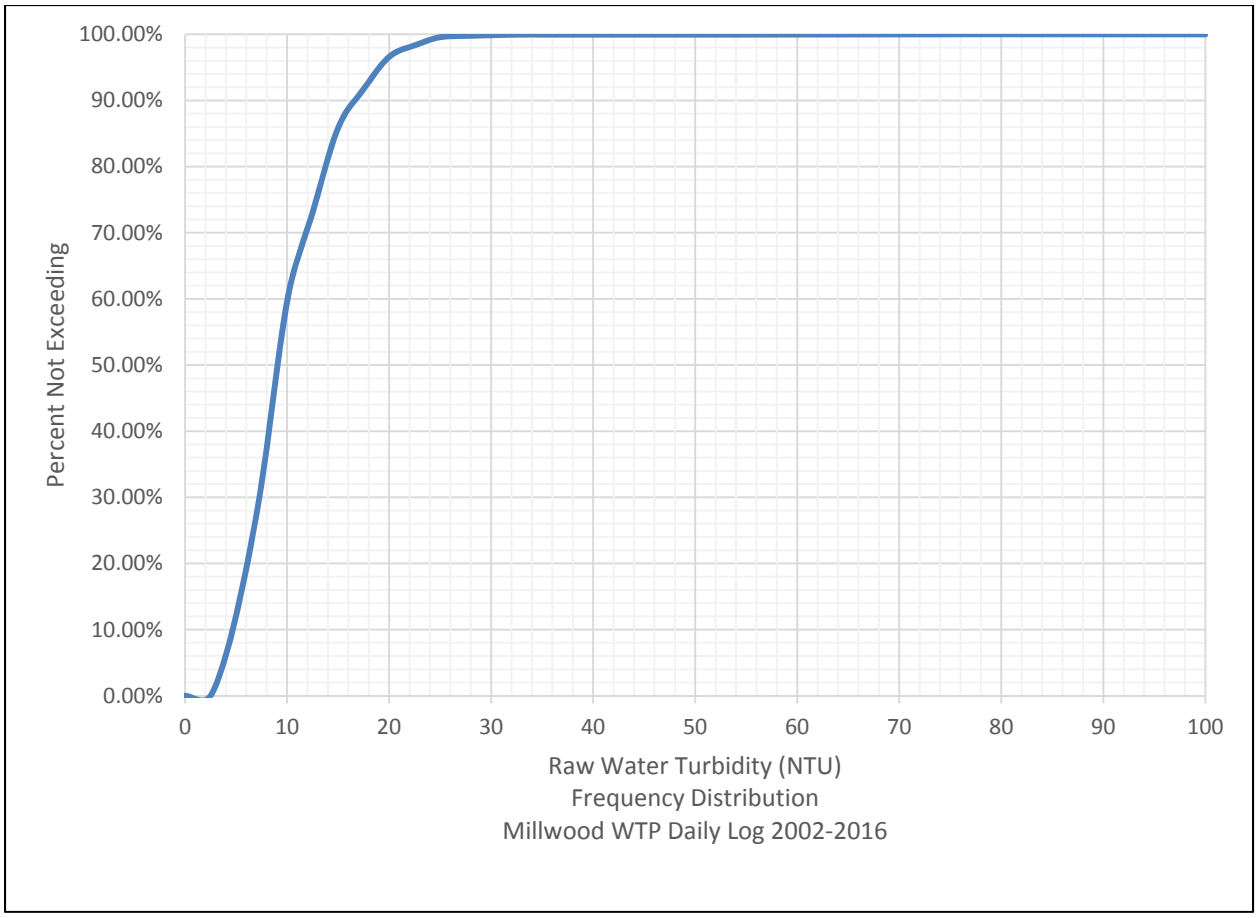


Figure H-18: Frequency Distribution of Raw Water Turbidity at Millwood WTP

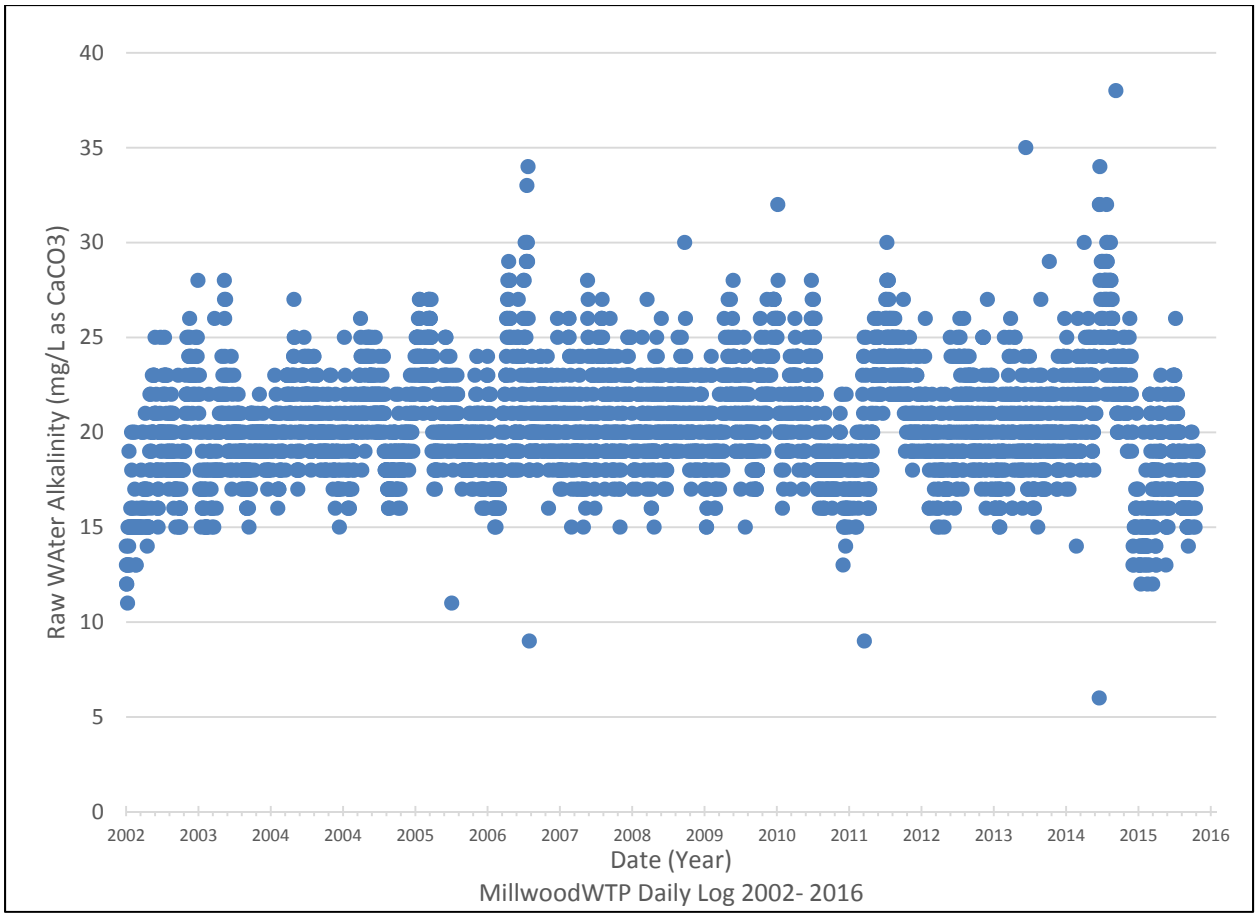


Figure H-19: Historical Distribution of Raw Water Alkalinity at Millwood WTP

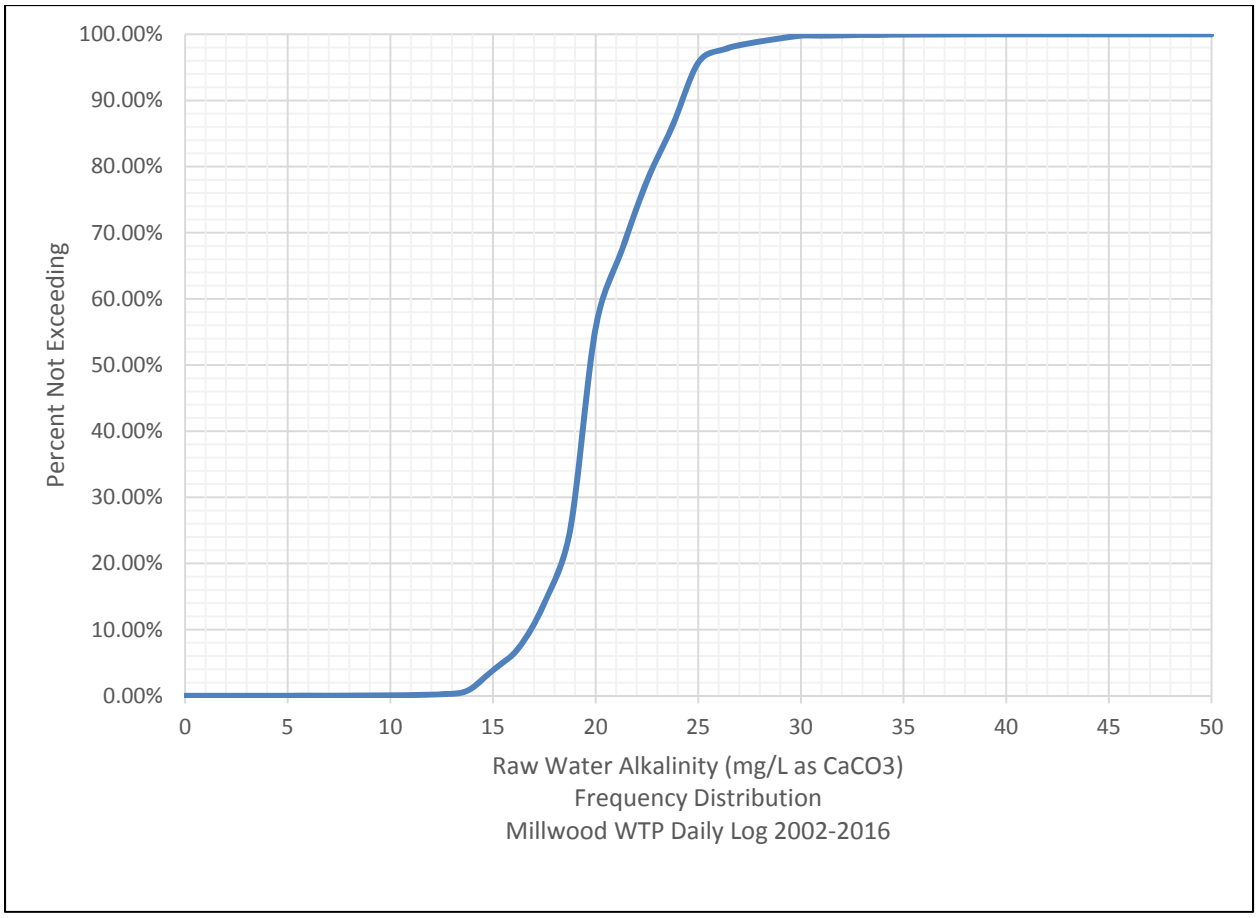


Figure H-20: Frequency Distribution of Raw Water Alkalinity at Millwood WTP

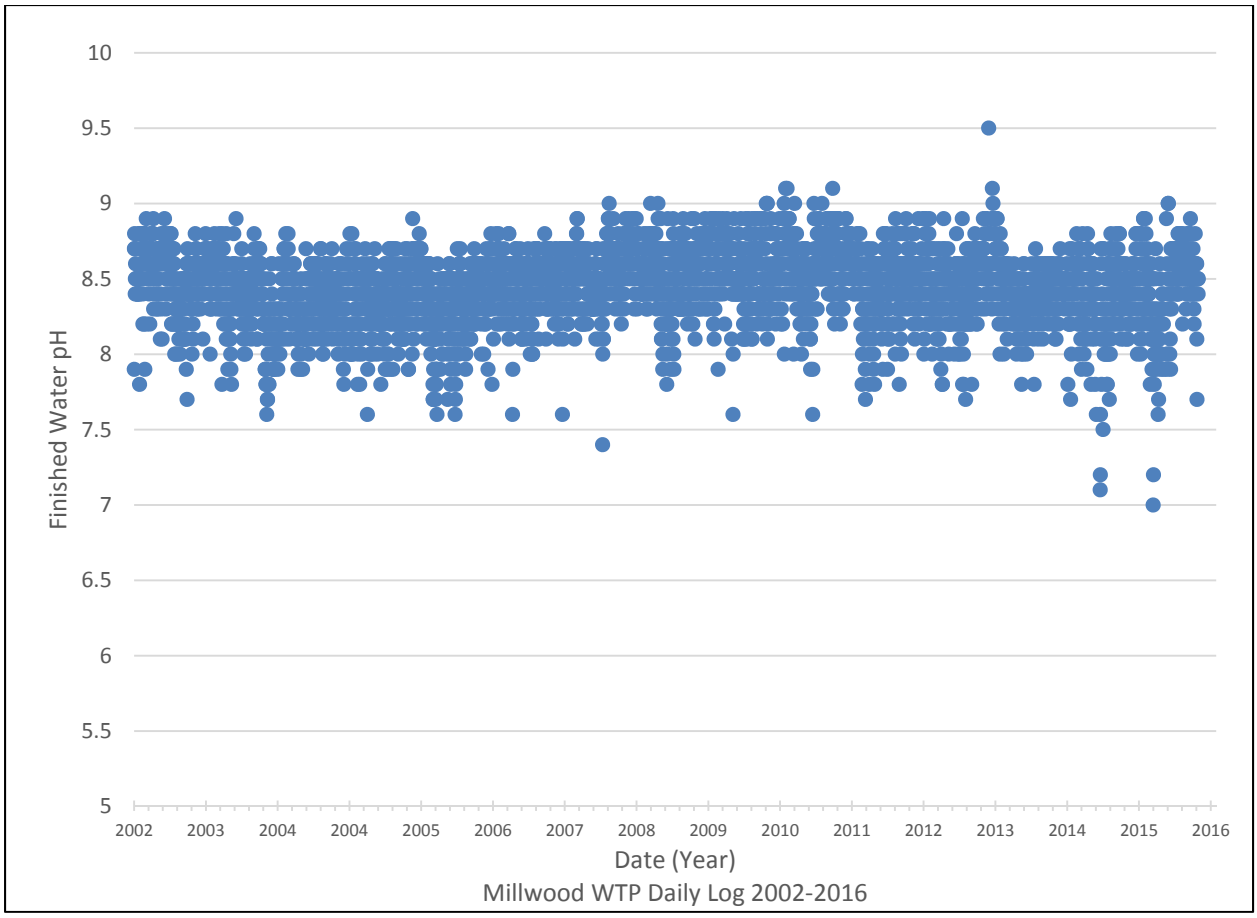


Figure H-21: Historical Distribution of Finished Water pH at Millwood WTP

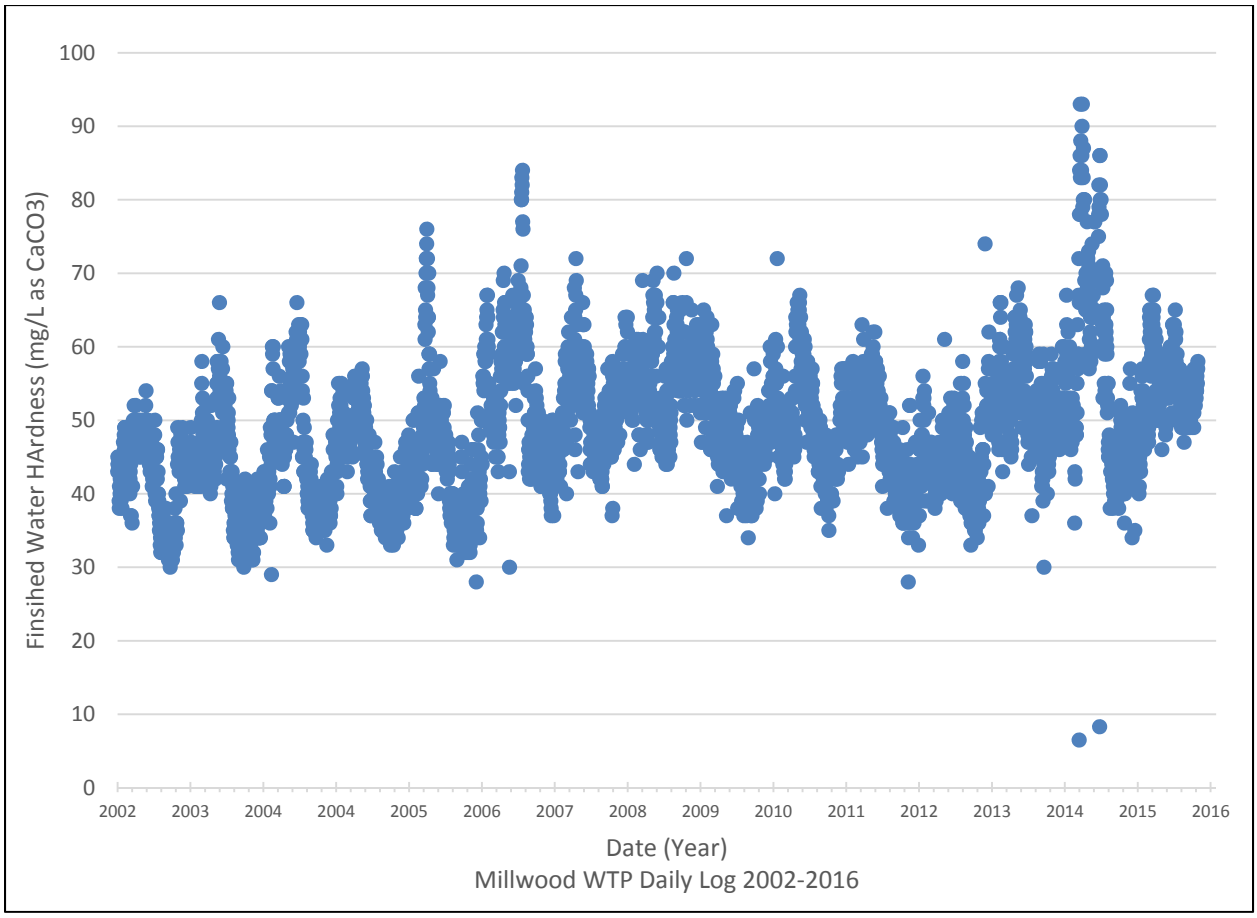


Figure H-22: Historical Distribution of Finished Water Hardness at Millwood WTP

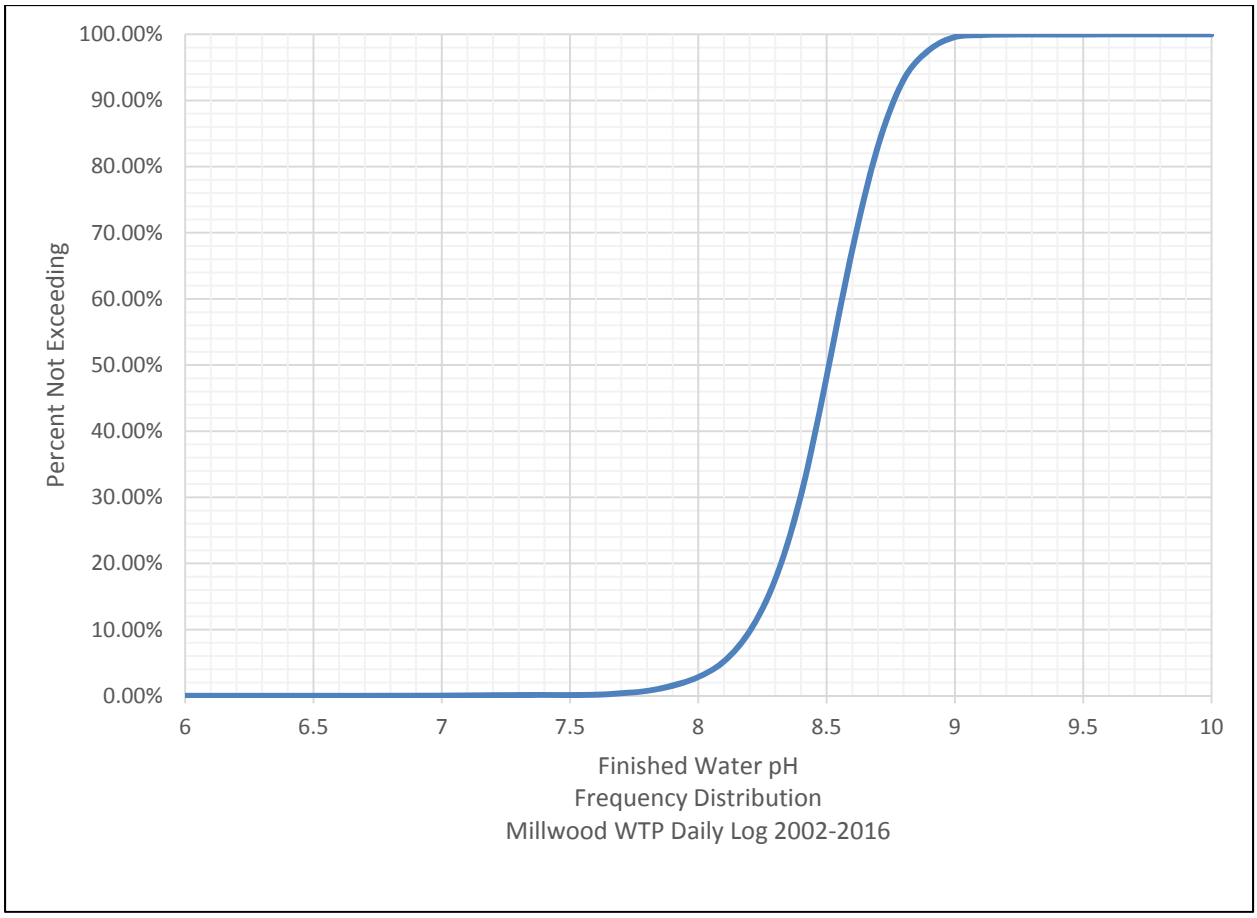


Figure H-23: Frequency Distribution of Finished Water pH at Millwood WTP

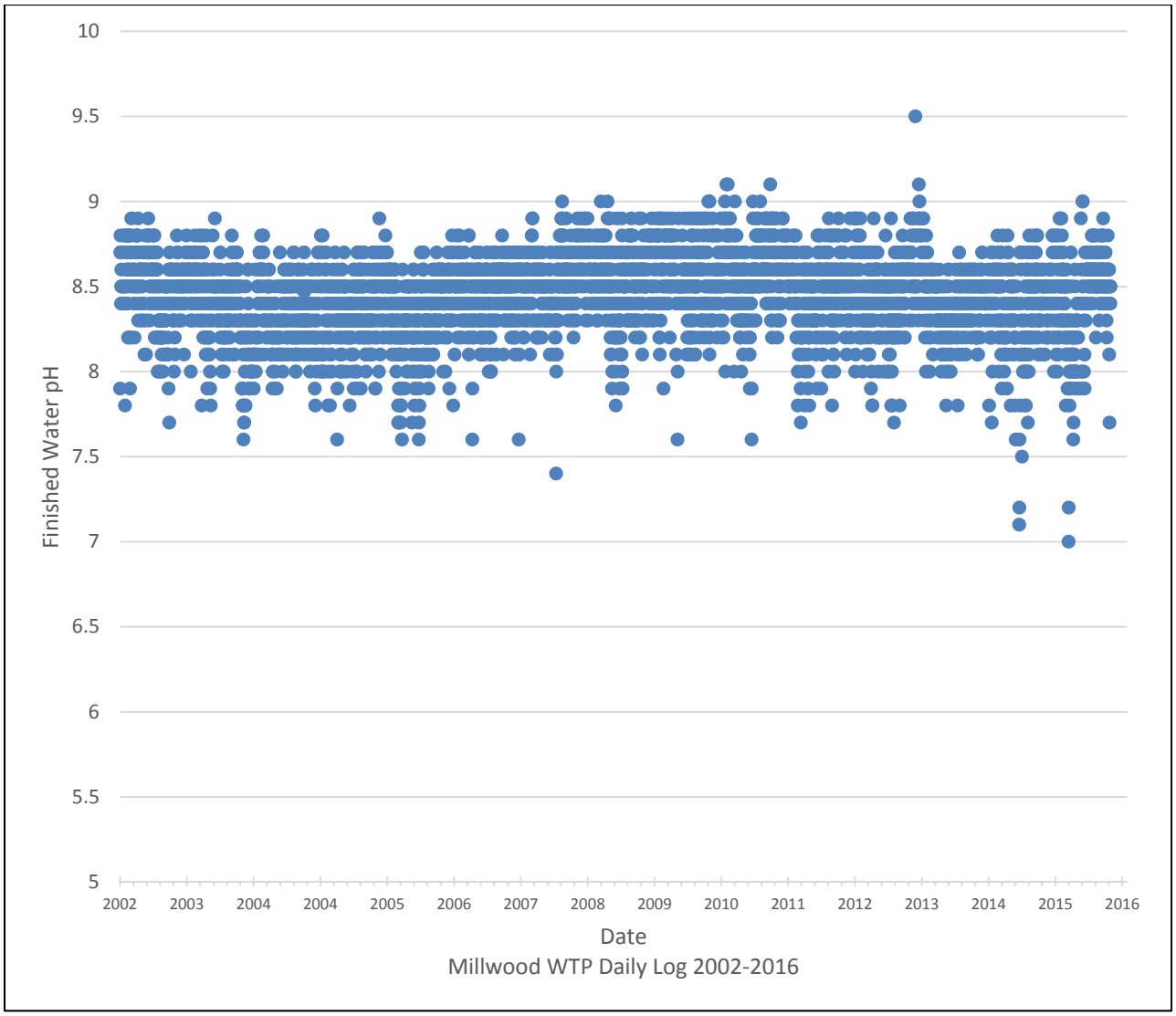


Figure H-24: Historical Distribution of Finished Water pH at Millwood WTP

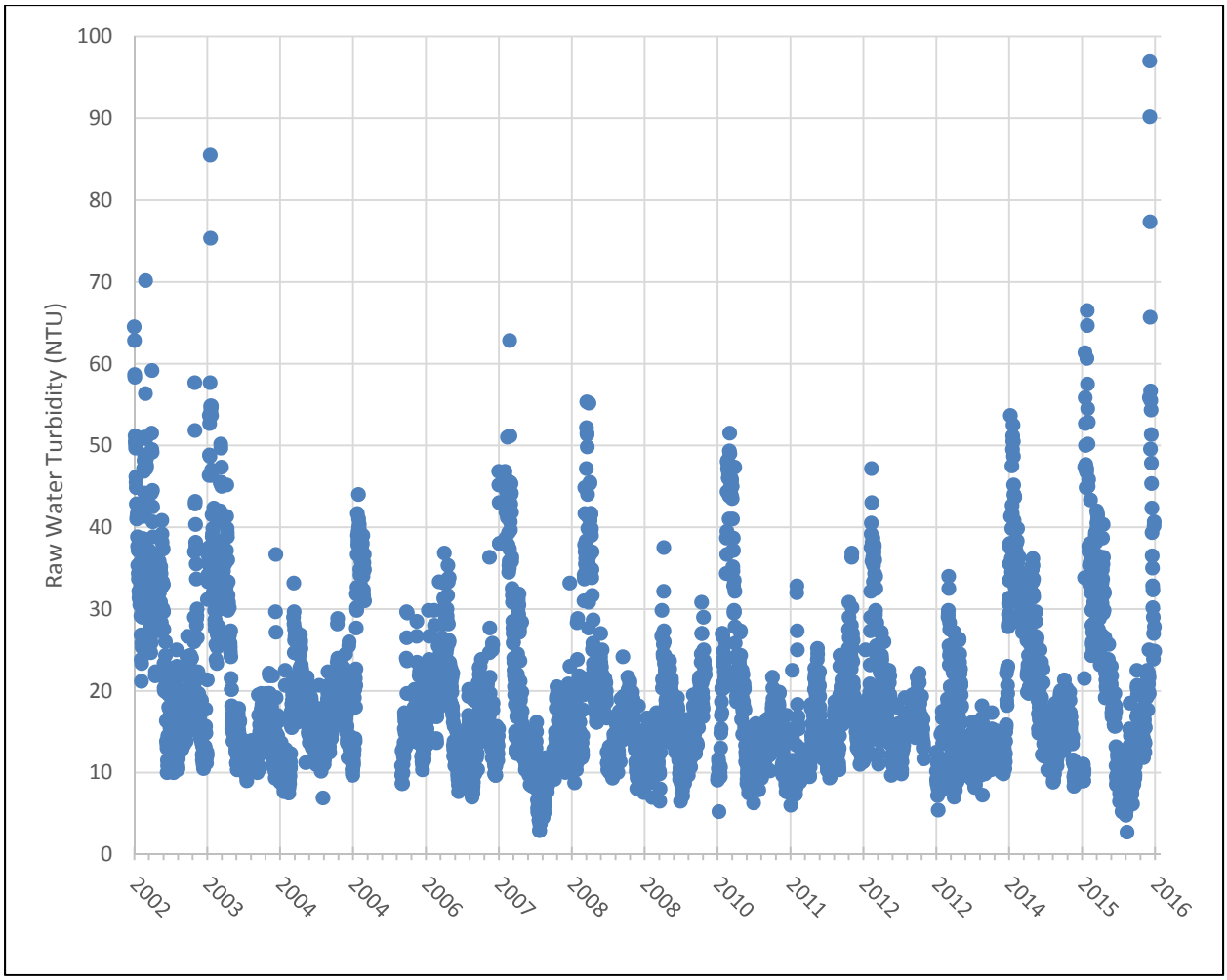


Figure H-25: Historical Distribution of Raw Water Turbidity at IP (now GPI) WTP

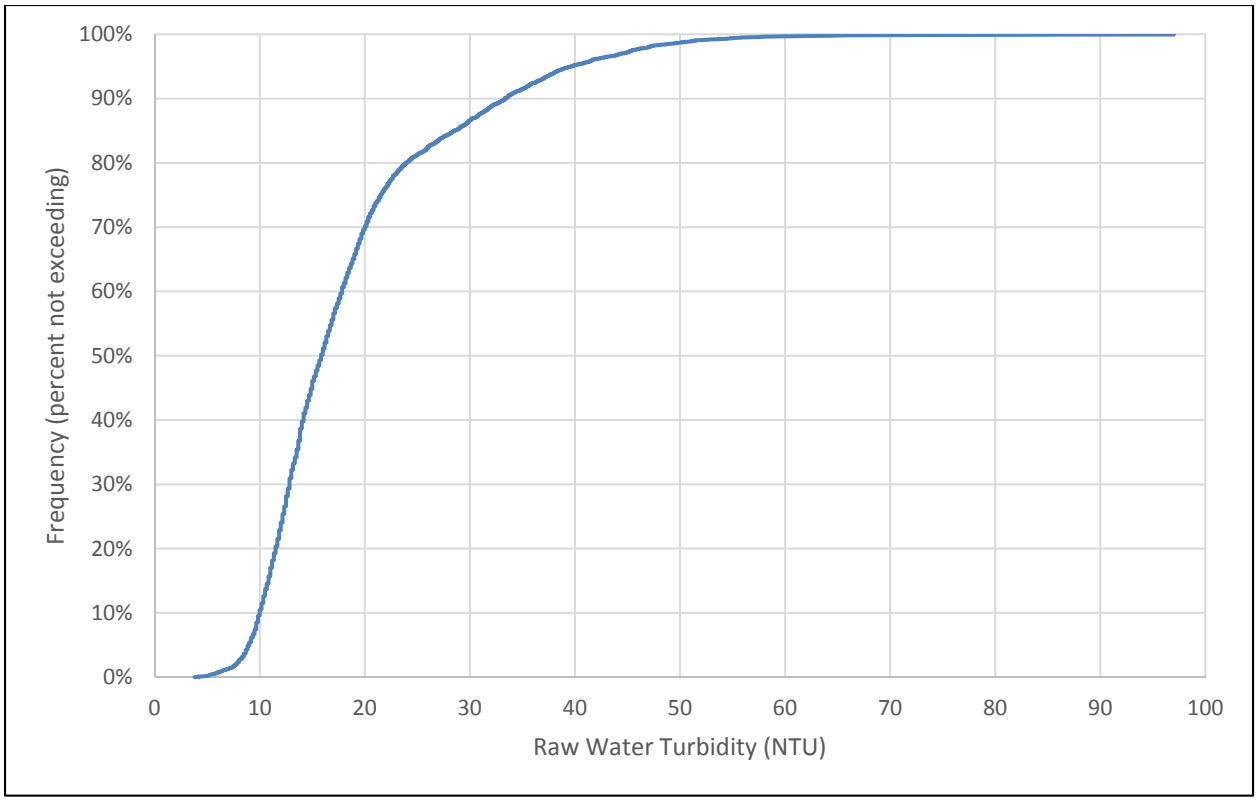


Figure H-26: Frequency Distribution of Raw Water Turbidity at IP (now GPI) WTP

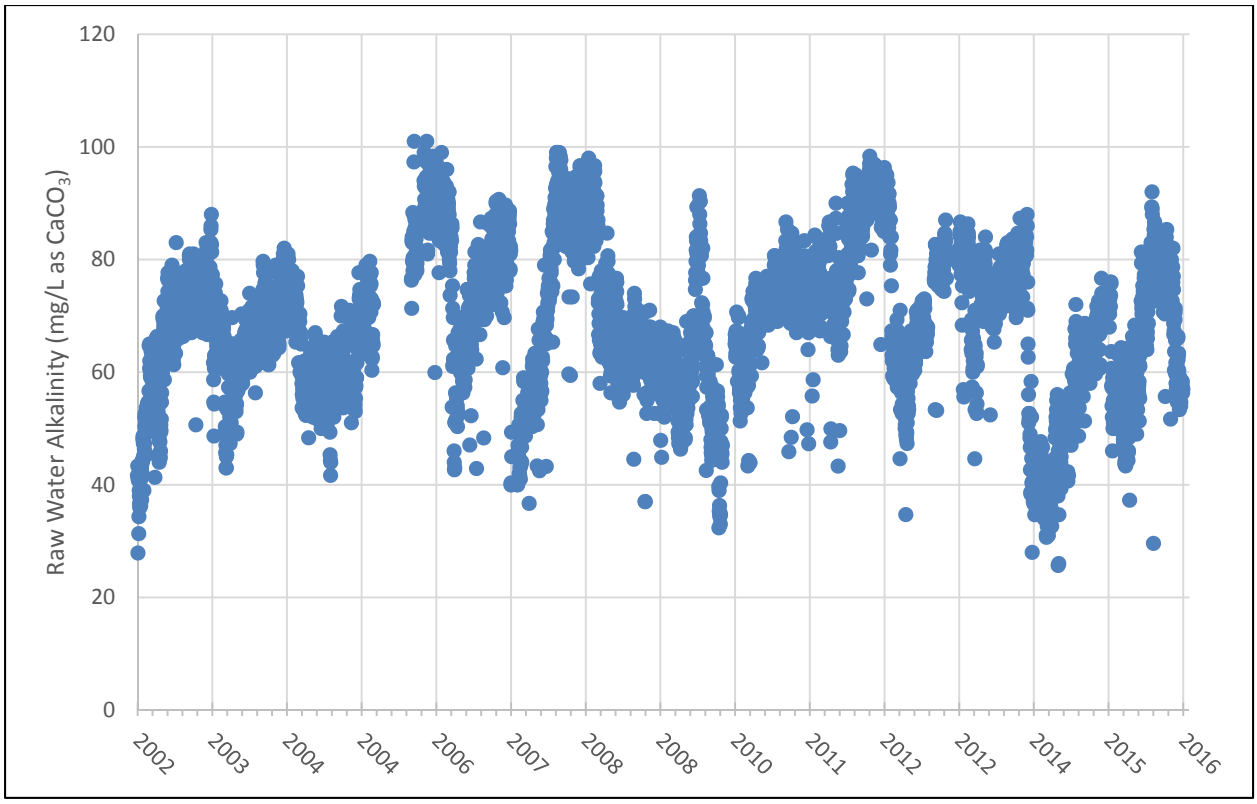


Figure H-27: Historical Distribution of Raw Water Alkalinity at IP (now GPI) WTP

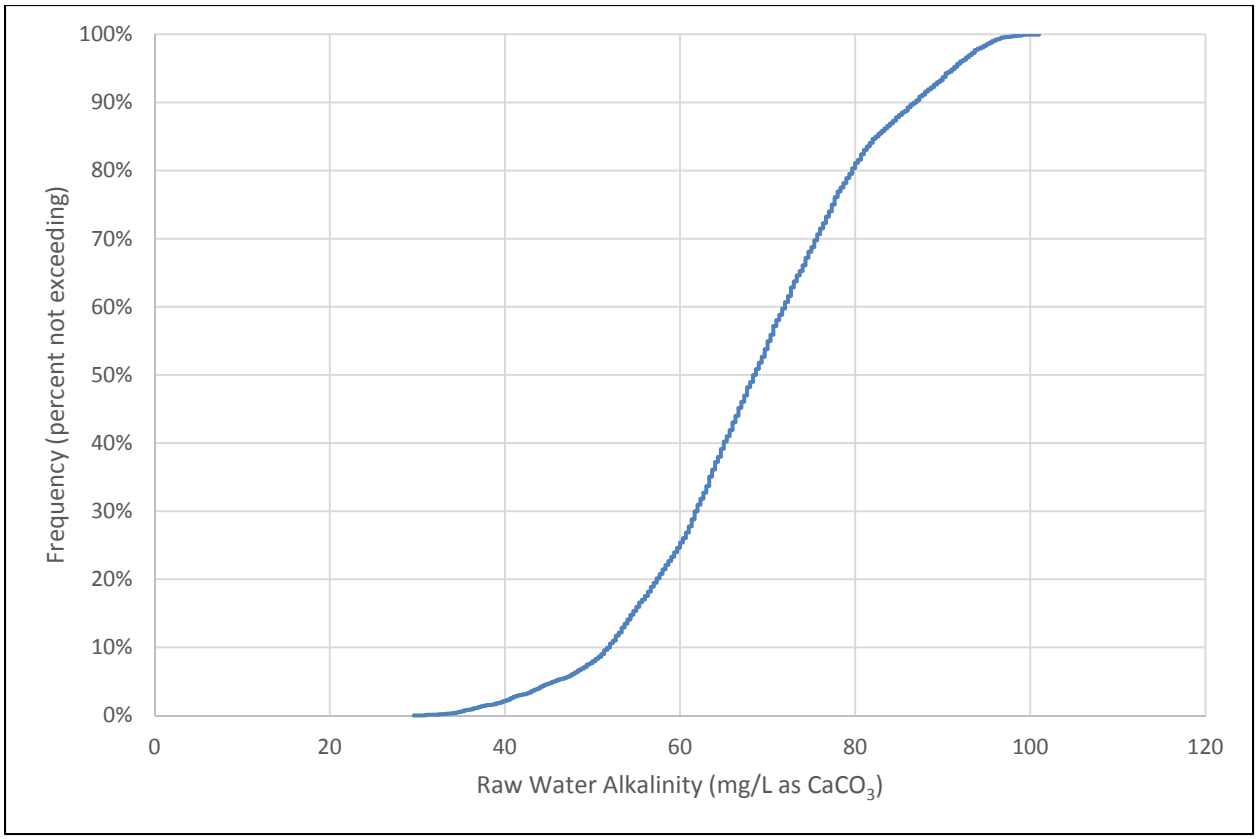


Figure H-28: Frequency Distribution of Raw Water Alkalinity at IP (now GPI) WTP

APPENDIX I

Water Treatment Plant Permits

SUSAN ROTH
water and wastewater consulting

Place Holder for New Boston Road WTP Permit

ADEQ
ARKANSAS
Department of Environmental Quality

Permit Tracking Number: ARG640106
AFIN: 41-00045

NOTICE OF COVERAGE (NOC)
WATER TREATMENT FACILITIES GENERAL PERMIT, ARG640000

Texarkana Water Utilities
Attn: Joe Doss Phillips
801 Wood St.
Texarkana, TX 75503

The Recertification Notice of Intent (NOI) for continued coverage under the above General Permit was received on June 14, 2016 and has been reviewed. The facility will continue under Permit Tracking Number **ARG640106** and AFIN **41-00045**. Any permit-related correspondence must include these numbers. This NOC is issued to Texarkana Water Utilities in reliance upon the statements and representations made in the submittal for the following facility located in Little River County:

Texarkana Water Utilities - Millwood WTP
136 Little River County Road
Ashdown, AR 71822

The facility's treatment system consists of a sedimentation pond.

Compliance with all conditions and limitations of the enclosed general permit is required. Please be advised that the permit contains monitoring and reporting requirements. Pre-printed Discharge Monitoring Reports (DMRs) will be mailed to you at a later time by the Department.

Discharges allowed by the permit shall only occur at the following outfall location:

Outfall 101: Latitude 33° 38' 26" Longitude 94° 05' 30"

to receiving waters named:

unnamed tributary of Hudson Creek, thence to Hudson Creek, thence to Little River, thence to Red River.

Original Coverage Date: November 1, 1999

Renewal Date: December 1, 2016

Expiration Date: November 30, 2021

Robert E. Blanz

Robert E. Blanz, PhD, P.E.
Acting Sr. Operations Manager
Office of Water Quality

11/15/2016
Coverage Date

Authorization to Discharge Under the National Pollutant Discharge Elimination System and the Arkansas Water Pollution Control Act

In accordance with the provisions of the Arkansas Water Pollution Control Act (Act 472 of 1949, as amended, Ark. Code Ann. 8-4-101 et seq.), and the Clean Water Act (33 U.S.C. 1251 et seq.),

Water Treatment Plants with a wastewater discharge located within the State of Arkansas

are authorized to discharge treated process water from potable water treatment plants to all receiving waters except as stated in Part 1.3 in accordance with effluent limitations, monitoring requirements, and other conditions set forth in this permit.

Operators within the State of Arkansas who fail to make a written request to the Director to be covered by this general permit are not authorized to discharge under this general permit.

After properly filing a Notice of Intent under Part 1.4, facilities that are eligible for coverage under this general permit, will receive a Notice of Coverage (NOC) letter, with a tracking number starting with ARG64, and a copy of the permit for the facility. The NOC letter includes the Department's determination that a facility is covered under this general permit and may specify alternate requirements outlined in the permit, such as modified sampling frequencies for certain parameters or the inclusion of monitoring for parameters in addition to those requiring regular monitoring.

Effective Date: December 1, 2016

Expiration Date: November 30, 2021

Caleb J. Osborne
Associate Director, Office of Water Quality
Arkansas Department of Environmental Quality

6/3/16
Issue Date

PART 1
PERMIT REQUIREMENTS
COVERAGE UNDER THIS PERMIT

1.1. Permit Area: The area covered by this permit includes all areas within the State of Arkansas.

1.2. Eligibility

1.2.1 This general permit covers discharges associated with water treatment plants (including, but not limited to: wastewaters from iron and manganese removal, micro-filtration, chemical softening, coagulation or sedimentation, sedimentation basin blowdown, lab sink water, pump cooling water, and filter backwash). Prior to discharge to waters of the State, all waste streams shall be treated in a treatment system that has been constructed in accordance with the terms and conditions of a state construction permit issued to the facility by the Arkansas Department of Environmental Quality (see Part 1.4.3.3).

1.2.2 Applicants for this general permit must submit a complete Notice of Intent (NOI) to the Department to discharge under this general permit, as stated in Part 1.4.

1.2.3 Facilities within the State of Arkansas discharging from outfalls as described in this permit, must be authorized to discharge by either this general permit or an Individual NPDES Discharge Permit (Individual Permit).

1.3 Exclusions

Although this general permit does not cover the following types of discharges, other permits such as an Individual Permit or other approval from the Department may be obtained. This permit does not authorize the following discharges from Water Treatment Plants:

1.3.1 direct discharges into Extraordinary Resource Waters (ERWs), Ecologically Sensitive Waters (ESWs), or Natural and Scenic Waterways (NSWs),

1.3.2 discharges into a receiving water listed pursuant to Section 303(d) of the Clean Water Act where the discharge contains pollutant(s) of concern and the requirements of the permit are inadequate to provide sufficient reduction of the listed pollutant(s),

1.3.3 discharges from a facility into receiving waters for which there is an established Total Maximum Daily Load (TMDL) and Waste Load Allocation (WLA) for a pollutant that is limited in this permit, and the limit is not restrictive enough for the facility to meet the TMDL and WLA requirements, or

1.3.4 discharges, not previously permitted or covered by this general permit, into a losing stream segment as defined in Arkansas Pollution Control and Ecology Commission (APC&EC) Regulation No. (Reg.) 6.301(B).

1.4 Notification Requirements

1.4.1. In order to discharge under this general permit, operators of potable water treatment systems located within the State of Arkansas must submit the following items to the Department:

1.4.1.1. a Notice of Intent (NOI);
1.4.1.2. a state construction permit number and a statement that the facility was constructed in accordance with the plans and specifications approved by the Department;

1.4.1.3. a site map indicating the location of the facility, treatment areas, and outfalls;
1.4.1.4. a process flow diagram;
1.4.1.5. if the permittee is a corporation, proof of good standing with their state of origin must be provided;
1.4.1.6. a Disclosure Statement as required by APC&EC Reg. 8.204, if applicable; and
1.4.1.7. a permit fee as required by APC&EC Reg. 9.404.

1.4.2. The NOI shall include the following minimum information:

1.4.2.1. the legal name and legal address of the operator;
1.4.2.2. the facility location (street address or legal description);
1.4.2.3. name, telephone number, and email address of the facility contact;
1.4.2.4. number and location of outfalls, including a brief narrative description of each;
1.4.2.5. name of the receiving stream;
1.4.2.6. the actual or projected wastewater flow rate;
1.4.2.7. source of the raw water; and
1.4.2.8. all NOIs for coverage under this general permit must be signed and certified in accordance with the provisions of 40 CFR 122.22, as adopted by reference in APC&EC Reg. 6.104(A)(3).

1.4.3. Requests for Coverage shall be submitted as follows:

1.4.3.1. <u>For existing discharges covered under the General Permit (ARG640000) that expires on November 30, 2016</u>

The operator is required to notify the Department of his/her intent to be covered under this general permit no later than the effective date of this general permit.

1.4.3.2. <u>Continuation of the Expired General Permit.</u>

If this permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with the Administrative Procedure Act and remain in force and effect. If you were granted permit coverage prior to the expiration date, in accordance with 1.4.3.1, you will automatically remain covered by the continued permit until the earliest of:

1.4.3.2.1. Reissuance or replacement of this permit, at which time the operator must comply with the conditions of the new permit to maintain authorization to discharge;

1.4.3.2.2. Submittal of a Notice of Termination;

1.4.3.2.3. Issuance of an Individual Permit for the facility's discharges; or

1.4.3.2.4. A formal permit decision by the ADEQ to not re-issue this general permit, at which time you must seek coverage under an Individual Permit or other general permits, if available.

1.4.3.3. <u>For new discharges</u>

An NOI and all necessary information (including a state construction permit number and a statement that the facility was constructed in accordance with the state construction

permit and the plans and specifications approved by the Department) must be completed and submitted to the Department no later than thirty (30) days prior to first discharge. Unpermitted facilities, and facilities that have allowed coverage under the general permit to expire, will be processed as new discharges.

Note: State construction permits may take as long as 180 days to issue.

1.4.4. Notices of Intent, permit fees (no permit coverage will be issued until all fees have been paid), and other required documents may be submitted to the following address:

ADEQ, Office of Water Quality
Attn: General Permits
5301 Northshore Drive
North Little Rock, AR 72118

OR

by email: water-permit-application@adeq.state.ar.us

OR

by electronic application using ADEQ ePortal: https://eportal.adeq.state.ar.us/

1.4.5. NOI Review and Public Notification Process

All NOIs for permit coverage under this general permit will be reviewed by ADEQ prior to undergoing a public notification process as follows:

Upon receipt of an NOI, ADEQ will review the submitted documents to ensure that all permit requirements are fulfilled. ADEQ may request additional information from the applicant if additional information is necessary to complete the NOI. If ADEQ makes a preliminary determination that the NOI is complete, the NOI will be made available for five (5) business days for public review on the ADEQ website. Questions or remarks on the NOI may be submitted to ADEQ by E-mail at water-draft-permit-comment@adeq.state.ar.us. ADEQ will review comments received during this period and, if necessary, require the applicant to revise the NOI or submit an Individual Permit application. If determined appropriate by ADEQ, the operator will be granted coverage under this general permit upon written notification by ADEQ.

Comments will only be considered if they regard a specific facility's NOI. Comments on the contents of the General Permit ARG640000 will not be considered during the public comment period for a specific facility's coverage under this permit.

1.4.6. Operator License Requirements

1.4.6.1. Industrial Facilities: The operator of the treatment system shall be licensed as Basic Industrial by the State of Arkansas in accordance with APC&EC Reg. 3.

1.4.6.2. Municipal Facilities: The operator of the treatment system shall be licensed as Class I Municipal or Basic Industrial by the State of Arkansas in accordance with APC&EC Reg. 3.

1.4.6.3. New Permittees shall have the appropriate license prior to commencing the operation of the treatment system.

1.5 Requiring an Individual Permit

1.5.1. At the discretion of the Director, the Department may require any operator covered under this general permit to apply for and obtain an Individual Permit for reasons that include but are not limited to the following:

1.5.1.1. The discharger is a significant contributor of pollution;
1.5.1.2. The discharger is not in compliance with the conditions of the general permit; or
1.5.1.3. Conditions or standards have changed so that the discharger no longer qualifies for a general permit.

1.5.2. The operator must be notified in writing that an application for an Individual Permit is required. The operator will remain covered under the general permit, including an administratively continued general permit (see Part 1.4.3.2.), until an Individual Permit is issued, as long as the operator submits, in a timely manner, a complete application for an Individual Permit and any other required information. When an Individual Permit is issued to an operator otherwise covered under this general permit, the applicability of the general permit to that operator automatically terminates upon the effective date of the Individual Permit.

1.5.3. Any operator covered by this general permit may request to be excluded from the coverage by applying for an Individual Permit.

1.6 Notice of Termination (NOT)

Operators shall notify the Director upon permanent termination of all discharge from permitted outfalls at their facilities by submitting an NOT.

1.7 Re-opener Clause

In accordance with 40 CFR Part 122.62(a)(2), this permit may be modified, or alternatively, revoked and reissued, if new information is received that was not available at the time of permit issuance that would have justified the application of different permit conditions at the time of permit issuance.

PART 2
EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2.1 Outfall Type 101: Facilities With a Daily Average Waste Discharge Flow[1] ≤ 0.5 MGD

The permittee is authorized to discharge from Outfall Type 101 from activities associated with the production of potable water from water treatment plants. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristics	**Discharge Limitations** (mg/L unless otherwise specified)		**Monitoring Requirements**	
	Monthly Avg.	Daily Max	Frequency	Sample Type
Flow	Report, MGD	Report, MGD	five/week	instantaneous/ totalizing/ calculated[2]
Total Suspended Solids (TSS)	20.0	30.0	once/quarter[7]	grab
Iron (Dissolved)[3]	1.0	2.0	once/quarter[7]	grab
Manganese (Dissolved)[3]	1.0	2.0	once/quarter[7]	grab
Aluminum (Dissolved)[4]	1.0	2.0	once/quarter[7]	grab
Total Residual Chlorine (TRC)[5,6]	0.011 (Inst. Max.)		once/quarter[7]	grab
pH	Minimum 6.0 s.u.	Maximum 9.0 s.u.	once/quarter	grab

[1] See Part 3.1 for the definition of Daily Average Waste Discharge Flow.
[2] See Part 6.2.
[3] These limits apply only to facilities that use groundwater as source water.
[4] These limits apply only to facilities that use aluminum-based coagulants in the treatment process.
[5] This limit does not apply to facilities that do not discharge chlorinated water from their wastewater treatment system, nor to facilities with wastewater retention ponds with a retention time greater than 24 hours.
[6] TRC must be measured using any approved test method established in 40 CFR 136 capable of meeting a detection level of 0.033 mg/l or lower. If TRC is not detected at the required detection level (i.e., lab result is "ND"), report "0" on the Discharge Monitoring Report (DMR). Report the concentration if TRC is detected and measured in the sample.
[7] See Part 3.4 regarding qualifications for reduction in the frequency of monitoring.

There shall be no discharge of distinctly visible solids, scum, or foam other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the outfall, following the final treatment unit.

If there is more than one discharge point, each point shall be designated as a separate outfall. Each outfall must be sampled, analyzed, and reported.

The permittee shall at all times properly operate and maintain the facilities to achieve compliance with the conditions of this permit, including additional sampling and testing as necessary to ensure that permit limitations are not exceeded at any time.

2.2 Outfall Type 102: Facilities With a Daily Average Waste Discharge Flow[1] > 0.5 But ≤ 1.0 MGD.

The permittee is authorized to discharge from Outfall Type 102 from activities associated with the production of potable water from water treatment plants. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristics	**Discharge Limitations** (mg/L unless otherwise specified)		**Monitoring Requirements**	
	Monthly Avg.	Daily Max	Frequency	Sample Type
Flow	Report, MGD	Report, MGD	five/week	instantaneous/ totalizing/ calculated[2]
Total Suspended Solids (TSS)	20.0	30.0	once/month[7]	grab
Iron (Dissolved)[3]	1.0	2.0	once/month[7]	grab
Manganese (Dissolved)[3]	1.0	2.0	once/month[7]	grab
Aluminum (Dissolved)[4]	1.0	2.0	once/month[7]	grab
Total Residual Chlorine (TRC)[5,6]	0.011 (Inst. Max.)		once/month[7]	grab
pH	Minimum 6.0 s.u.	Maximum 9.0 s.u.	once/month	grab

[1] See Part 3.1 for the definition of Daily Average Waste Discharge Flow.
[2] See Part 6.2.
[3] These limits apply only to facilities that use groundwater as source water.
[4] These limits apply only to facilities that use aluminum-based coagulants in the treatment process.
[5] This limit does not apply to facilities that do not discharge chlorinated water from their wastewater treatment system, nor to facilities with wastewater retention ponds with a retention time greater than 24 hours.
[6] TRC must be measured using any approved test method established in 40 CFR 136 capable of meeting a detection level of 0.033 mg/l or lower. If TRC is not detected at the required detection level (i.e., lab result is "ND"), report "0" on the Discharge Monitoring Report (DMR). Report the concentration if TRC is detected and measured in the sample.
[7] See Part 3.4 regarding qualifications for reduction in the frequency of monitoring.

There shall be no discharge of distinctly visible solids, scum, or foam other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the outfall, following the final treatment unit.

If there is more than one discharge point, each point shall be designated as a separate outfall. Each outfall must be sampled, analyzed, and reported.

The permittee shall at all times properly operate and maintain the facilities to achieve compliance with the conditions of this permit, including additional sampling and testing as necessary to ensure that permit limitations are not exceeded at any time.

2.3 Outfall Type 103: Facilities With a Daily Average Waste Discharge Flow[1] > 1.0 MGD.

The permittee is authorized to discharge from Outfall Type 103 from activities associated with the production of potable water from water treatment plants. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristics	**Discharge Limitations** (mg/L unless otherwise specified)		**Monitoring Requirements**	
	Monthly Avg.	Daily Max	Frequency	Sample Type
Flow	Report, MGD	Report, MGD	five/week	instantaneous/ totalizing/ calculated[2]
Total Suspended Solids (TSS)	20.0	30.0	once/week[7]	grab
Iron (Dissolved)[3]	1.0	2.0	once/week[7]	grab
Manganese (Dissolved)[3]	1.0	2.0	once/week[7]	grab
Aluminum (Dissolved)[4]	1.0	2.0	once/week[7]	grab
Total Residual Chlorine (TRC)[5,6]	0.011 (Inst. Max.)		once/week[7]	grab
pH	Minimum 6.0 s.u.	Maximum 9.0 s.u.	once/week	grab

[1] See Part 3.1 for the definition of Daily Average Waste Discharge Flow.
[2] See Part 6.2.
[3] These limits apply only to facilities that use groundwater as source water.
[4] These limits apply only to facilities that use aluminum-based coagulants in the treatment process.
[5] This limit does not apply to facilities that do not discharge chlorinated water from their wastewater treatment system, nor to facilities with wastewater retention ponds with a retention time greater than 24 hours.
[6] TRC must be measured using any approved test method established in 40 CFR 136 capable of meeting a detection level of 0.033 mg/l or lower. If TRC is not detected at the required detection level (i.e., lab result is "ND"), report "0" on the Discharge Monitoring Report (DMR). Report the concentration if TRC is detected and measured in the sample.
[7] See Part 3.4 regarding qualifications for reduction in the frequency of monitoring.

There shall be no discharge of distinctly visible solids, scum, or foam other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the outfall, following the final treatment unit.

If there is more than one discharge point, each point shall be designated as a separate outfall. Each outfall must be sampled, analyzed, and reported.

The permittee shall at all times properly operate and maintain the facilities to achieve compliance with the conditions of this permit, including additional sampling and testing as necessary to ensure that permit limitations are not exceeded at any time.

PART 3
OTHER REQUIREMENTS

3.1 Daily Average Waste Discharge Flow

The Daily Average Waste Discharge Flow is defined as the total flow discharged during the past two years from the effective date of the permit divided by the number of discharge days. Flow data submitted with the NOI is used by the Department to calculate this number for the facility.

3.2 TRC Requirements

Prior to final discharge, the effluent shall contain NO MEASURABLE TRC at any time. NO MEASURABLE TRC will be defined as less than 0.033 mg/L (no detectable concentration of TRC as determined by any approved method established in 40 CFR Part 136). The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes. TRC shall be measured within fifteen (15) minutes of sampling.

The monitoring and reporting requirements for TRC do not apply to facilities that do not discharge chlorinated water from their wastewater treatment system, nor to facilities with wastewater retention ponds with a retention time greater than 24 hours.

3.3 Requirements for Separate Outfalls

If there is more than one discharge point, each point shall be designated as a separate outfall. Each outfall must be sampled, analyzed, and reported on a separate DMR.

3.4 Qualification for Monitoring Frequency Reductions

The permittee may apply for a reduction in the frequency of monitoring for any of the following parameters: Aluminum, Iron, Manganese, TRC, or TSS. Upon submission of appropriate documentation, and following approval by ADEQ, monitoring frequency reduction will be granted and effective under the following conditions:

3.4.1 For Aluminum, Iron, Manganese, or TRC: If the permittee's most recent two years of samples for the parameter have been in compliance with the applicable effluent limitation, the monitoring frequency for the parameter will be reduced to once per year.

3.4.2 For TSS for permittees subject to Part 2.1 (Type 101): If the permittee's most recent two years of samples for TSS have been in compliance with the TSS effluent limitation, the monitoring frequency for TSS will be reduced to once every six (6) months.

3.4.3 For TSS for permittees subject to Part 2.2 (Type 102) or Part 2.3 (Type 103): If the permittee's most recent two years of samples for TSS have been in compliance with the TSS effluent limitation, the monitoring frequency for TSS will be reduced to once per quarter.

3.4.4 Samples taken under prior NPDES General Permits for water treatment plants may be utilized in support of an application for the reduction of monitoring frequency, provided that the samples were collected, analyzed, and reported in compliance with the applicable permit provisions.

3.4.5 The reduced monitoring frequency for a given parameter will continue, even through expiration and renewal of this general permit, as long as there are no exceedances of the permit limits for that parameter. A return to the baseline monitoring frequency for a parameter is required if a monitoring result is in exceedance of the permit limit for that parameter. The permittee must then re-qualify for reduced monitoring frequency, in accordance with Parts 3.4.1-3.4.4 above.

3.4.6 At the Director's discretion, a facility may be required to return to the baseline monitoring frequency for any parameter that has been granted reduced monitoring under Parts 3.4.1-3.4.3 above. Written notification of the decision will be provided to the permittee including justification for the decision.

PART 4
GENERAL CONDITIONS

4.1 Duty To Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Federal Clean Water Act and the Arkansas Water and Air Pollution Control Act and is grounds for enforcement action or for requiring a permittee to apply for an Individual Permit. **Any values reported in the required monitoring reports which are in excess of the effluent limitation specified in Part 2 shall constitute evidence of violation of such effluent limitation and of this permit**.

4.2 Penalties for Violations of Permit Conditions

The Arkansas Water and Air Pollution Control Act provides that any person who violates any provisions of a permit issued under the Act shall be guilty of a misdemeanor and upon conviction thereof shall be subject to imprisonment for not more than one (1) year, or a fine of not more twenty-five thousand dollars ($25,000) or by both such fine and imprisonment for each day of such violation. Any person who violates any provision of a permit issued under the Act may also be subject to civil penalty in such amount as the court shall find appropriate, not to exceed ten thousand dollars ($10,000) for each day of such violation. The fact that any such violation may constitute a misdemeanor shall not be a bar to the maintenance of such civil action.

4.3 Permit Actions

This general permit may be modified, revoked and reissued, or terminated for cause in accordance with the requirements of the National Pollutant Discharge Elimination System (NPDES) Permit Program Regulations at 40 CFR Parts 122 and 124, as adopted by reference in APC&EC Reg. 6. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

4.4 Toxic Pollutants

Notwithstanding Part 4.3, if any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under APC&EC Reg. 2, as amended, (regulation establishing water quality standards for surface waters of the State of Arkansas) or Section 307(a) of the Clean Water Act for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitations on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition and the permittee so notified.

The permittee shall comply with effluent standards or prohibitions established under APC&EC Reg. 2 (Arkansas Water Quality Standards), as amended, or Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

4.5 Civil and Criminal Liability

Except as provided in permit conditions on "Bypassing" (Part 5.4), and "Upsets" (Part 5.5), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

4.6 Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Clean Water Act.

4.7 State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Clean Water Act.

4.8 Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

4.9 Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

4.10 Permit Fees

The permittee shall comply with all applicable permit fee requirements for wastewater discharge permits as described in APC&EC Reg. 9 (Regulation for the Fee System for Environmental Permits). Failure to promptly remit all required fees shall be grounds for the Director to initiate action to terminate this permit under the provisions of 40 CFR 122.64 and 124.5(d), as adopted in APC&EC Reg. 6 and the provisions of APC&EC Reg. 8.

4.11 Permit Applicability

The permit is applicable only to facilities which are direct discharges into "Waters of the State" as defined in 40 CFR 122.2 and are subject to the requirements of sections 301 and 402 of the Clean Water Act.

4.12 Applicable Federal, State or Local Requirements.

Permittees are responsible for compliance with all applicable terms and conditions of this permit. Receipt of this permit does not relieve any operator of the responsibility to comply with any other applicable federal, state or local statute, ordinance, policy, or regulation.

PART 5
OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

5.1 Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit. The permittee shall provide an adequate operating staff which is duly qualified to carryout operation, maintenance and testing functions required to insure compliance with the conditions of this permit.

5.2 Need to Halt or Reduce not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. Upon reduction, loss, or failure of the treatment facility, the permittee shall, to the extent necessary to maintain compliance with its permit, control production or discharges or both until the facility is restored or an alternative method of treatment is provided. This requirement applies, for example, when the primary source of power for the treatment facility is reduced, is lost, or alternate power supply fails.

5.3 Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment or the water receiving the discharge.

5.4 Bypass of Treatment Facilities

5.4.1 Bypass not exceeding limitation.

The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Part 5.4.2 and 5.4.3.

5.4.2 Notice.

5.4.2.1 Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

5.4.2.2 Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Part 7.4 (twenty-four hour reporting).

5.4.3 Prohibition of bypass.

5.4.3.1 Bypass is prohibited and the Director may take enforcement action against a permittee for bypass, unless:

5.4.3.1.1 Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

5.4.3.1.2 There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the permittee could have installed adequate backup equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

5.4.3.1.3 The permittee submitted notices as required by Part 5.4.2.

5.4.3.2 The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in 5.4.3.1.

5.5 Upset Conditions

5.5.1 Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Part 5.5.2 of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

5.5.2 Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

5.5.2.1. An upset occurred and that the permittee can identify the specific cause(s) of the upset;
5.5.2.2. The permitted facility was at the time being properly operated;
5.5.2.3. The permittee submitted notice of the upset as required by Part 7.4.2; and
5.5.2.4. The permittee complied with any remedial measures required by Part 5.3.

5.5.3 Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

5.6 Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of waste waters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering the waters of the State. A state land application permit is required for land application of the above wastes.

5.7 Power Failure

The permittee is responsible for maintaining adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failure either by means of alternate power sources, standby generators, or retention of inadequately treated effluent.

PART 6
MONITORING AND RECORDS

6.1 Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken before the effluent joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the Director. Intermittent discharges shall be monitored.

6.2 Flow Measurement

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to insure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to insure the accuracy of the measurements are consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than 10% from true discharge rates throughout the range of expected discharge volumes and shall be installed at the monitoring point of the discharge.

In lieu of using a flow measurement device, the volume of the monitored discharge may be calculated by utilizing the flow measurements of filter backwash volumes that are required by Arkansas Department of Health in conjunction with operational data on both regular sedimentation basin blowdown volume and total sedimentation basin volume during periodic cleaning operations.

6.3 Monitoring Procedures

Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit. The permittee shall calibrate and perform maintenance procedures on all monitoring analytical instrumentation at intervals frequent enough to insure accuracy of measurements and shall insure that both calibration and maintenance activities will be conducted. An adequate analytical quality control program, including the analysis of sufficient standards, spikes, and duplicate samples to insure the accuracy of all required analytical results shall be maintained by the permittee or designated commercial laboratory.

6.4 Penalties for Tampering

The Arkansas Water and Air Pollution Control Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under the Act shall be guilty of a misdemeanor and upon conviction thereof shall be subject to imprisonment for not more than one (1) year, or a fine of not more than ten thousand dollars ($10,000) or by both such fine and imprisonment.

6.5 Reporting of Monitoring Results

Monitoring results must be reported on a printed Discharge Monitoring Report (DMR) form, or in electronic form through NetDMR. For printed forms, permittees are required to use the preprinted DMR forms provided by ADEQ, unless specific written authorization to use other reporting forms is obtained from ADEQ. Monitoring results obtained during the previous calendar month shall be summarized and reported on a DMR form postmarked no later than the 25th day of the month following the completed reporting period, or electronically submitted through Net DMR no later than the 25th day of the month following the completed reporting period, to begin on the effective date of the permit. Duplicate copies of DMRs signed and certified as required by Part 7.9 and all other reports required by Part 7 (Reporting Requirements), shall be submitted to the Director at the following address:

NPDES Enforcement Section
Office of Water Quality
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

If permittee uses outside laboratory facilities for sampling and/or analysis, the name and address of the contract laboratory shall be included on the DMR.

6.6. Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the summary report. Such increased frequency shall also be indicated in the summary report.

6.7. Retention of Records

The permittee shall retain records of all monitoring information, including daily logs, all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit, and records of all data used to request coverage under this permit, for a period of at least 3 (three) years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

6.8. Record Contents

Records and monitoring information shall include:

6.8.1 The date, exact place, time and methods of sampling or measurements;
6.8.2 The individuals(s) who performed the sampling or measurements;
6.8.3 The date(s) analyses were performed;
6.8.4 The individual(s) who performed the analyses;
6.8.5 The analytical techniques or methods used; and
6.8.6 The measurements and results of such analyses.

6.9 Inspection and Entry

The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

6.9.1 Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
6.9.2 Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
6.9.3 Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
6.9.4 Sample, inspect or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act and/or Arkansas Water and Air Pollution Control Act, any substances or parameters at any location.

PART 7
REPORTING REQUIREMENTS

7.1 Planned Changes

The permittee shall give notice and provide plans and specification to the Director for review and approval prior to any planned physical alterations or additions to the permitted facility.

Any change in the facility discharge (including the introduction of any new source or significant discharge or significant changes in the quantity or quality of existing discharges of pollutants) must be reported to the permitting authority. In no case are any new connections, increased flows, or significant changes in influent quality permitted that cause violation of the effluent limitations specified herein.

7.2 Transfers

Facilities that are authorized under this permit, which undergo a change in ownership, facility name, or signatory authorization (i.e., a new cognizant official, responsible person, etc.) must submit a Permit Transfer form to the Director. A Permit Transfer form can be obtained from the General Permits Section of the Office of Water Quality at the following website:

http://www.adeq.state.ar.us/water/branch_permits/general_permits/

For an ownership change, the permit transfer form must be submitted a minimum of 30 days prior to the date the transfer to the new operator will take place. The new owner must comply with the existing permit for the facility during the interim period. A Disclosure Form will be required. Until the disclosure statement and transfer request is submitted and accepted by ADEQ, the current permittee shall remain liable for permit compliance and all permit fees, even if the current permittee no longer owns the facility.

7.3 Monitoring Reports

Monitoring results shall be reported at the intervals and in the form specified in Part 6.5. **The permittee must submit a DMR every reporting period for each outfall while operating under the permit. A DMR must be submitted even if the facility was operated under the permit for only part of a reporting period. A DMR must also be submitted even when no discharge occurs during a reporting period.**

7.4 Twenty-Four Hour Reporting

The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrences of the noncompliance. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

The following shall be included as information which must be reported within 24 hours:

7.4.1 Any unanticipated bypass which exceeds any effluent limitation in the permit; and
7.4.2 Any upset which exceeds any effluent limitation in the permit.

7.5 Other Noncompliance

The permittee shall report all instances of noncompliance not reported under Parts 7.3 and 7.4 at the time monitoring reports are submitted. The reports shall contain the information listed at Part 7.4.

7.6 Changes in Discharge of Toxic Substances

The permittee shall notify the Director as soon as he/she knows or has reason to believe:

7.6.1 That any activity has occurred or will occur which would result in the discharge, in a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the "notification levels" described in 40 CFR 122.42(a)(1).

7.6.2 That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the "notification levels" described in 40 CFR Part 122.42(a)(2).

7.7 [Reserved]

7.8 Duty to Provide Information

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

7.9 Signatory Requirements

All applications, reports, or information submitted to the Director shall be signed and certified as follows:

7.9.1. All permit applications shall be signed as follows:

7.9.1.1. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

7.9.1.1.1. A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or

7.9.1.1.2. The manager of one or more manufacturing, production, or operation facilities, provided: the manager is authorized to make management decisions which govern the operation of the regulated facility, including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

7.9.1.2. For a partnership or sole proprietorship: by a general partner or proprietor, respectively; or

7.9.1.3. For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

7.9.1.3.1. The chief executive officer of the agency, or
7.9.1.3.2. A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

7.9.2. All reports required by the permit and other information requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

7.9.2.1. The authorization is made in writing by a person described above;

7.9.2.2. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

7.9.2.3. The written authorization is submitted to the Director.

7.9.3. Certification. Any person signing a document under this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

7.10 Availability of Reports

Except for data determined to be confidential under 40 CFR Part 2 and APC&EC Reg. 6, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department of Environmental Quality. As required by the Regulations, the name and address of any permit applicant or permittee, permit applications, permits and effluent data shall not be considered confidential.

7.11 Other Information

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

7.12 Penalties for Falsification of Reports

The Arkansas Water and Air Pollution Control Act provides that any person who knowingly makes any false statement, representation, or certification in any application, record, report, plan or other document filed or required to be maintained under this permit shall be subject to civil and/or criminal penalties specified in Part 4.2 under the authority of the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended).

PART 8
DEFINITIONS

All definitions contained in Section 502 of the Clean Water Act shall apply to this permit and are incorporated herein by reference. Additional definitions of words or phrases used in this permit are as follows:

8.1 "Act": the Clean Water Act, Public Law 95-217 (33.U.S.C.1251et seq.) as amended.
8.2 "ADEQ" the Arkansas Department of Environmental Quality.
8.3 "Administrator": the Administrator of the U.S. Environmental Protection Agency.
8.4 "APC&EC": the Arkansas Pollution Control and Ecology Commission.
8.5 "Applicable effluent standards and limitations": all State and Federal effluent standards and limitations to which a discharge is subject under the Act, including, but not limited to, effluent limitations, standards of performance, toxic effluent standards and prohibitions, and pretreatment standards.
8.6 "Applicable water quality standards": all water quality standards to which a discharge is subject under the federal Clean Water Act and which have been (a) approved or permitted to remain in effect by the Administrator following submission to the Administrator pursuant to Section 303(a) of the Act, or (b) promulgated by the Director pursuant to Section 303(b) or 303(c) of the Act, and standards promulgated under APC&EC Reg. 2, as amended, (regulation establishing water quality standards for surface waters of the State of Arkansas).
8.7 "Bypass": the intentional diversion of waste streams from any portion of a treatment facility.
8.8 "Daily Discharge": means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling.
  8.8.1 **Mass Calculations***:* For pollutants with limitations expressed in terms of mass, the "daily discharge" is calculated as the total mass of pollutant discharged over the sampling day.
  8.8.2 **Concentration Calculations**: For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.
8.9 "Daily Maximum": discharge limitation means the highest allowable "daily discharge" during the calendar month.
8.10 "Department": the Arkansas Department of Environmental Quality (ADEQ).
8.11 "Director": the Administrator of the U.S. Environmental Protection Agency and/or the Director of the Arkansas Department of Environmental Quality.
8.12 "Grab sample": an individual sample collected in less than 15 minutes in conjunction with an instantaneous flow measurement.
8.13 "Industrial Facility": a privately-owned (i.e. non-municipal) treatment plant.
8.14 "Losing Stream Segment": a stream segment which, beginning at the point of existing or proposed discharge and extending two (2) miles downstream, contribute thrity percent (30%) or more of its flow at a 7Q10 flow or one (1) cfs, whichever is greater, through natural processes such as permeable subsoil or cavernous bedrock into an aquifer.
8.15 "MGD": shall mean million gallons per day.
8.16 "mg/L": milligrams per liter; it is essentially equivalent to parts per million in dilute aqueous solutions.
8.17 "Monitoring and Reporting": When a permit becomes effective, monitoring requirements are of the immediate period of the permit effective date. Where the monitoring requirement for an effluent characteristic is Once/Month, the Discharge Monitoring Report shall be submitted by the 25th of the month following the sampling. Where the monitoring requirement for an effluent characteristic is Once/Quarter or Once/Year, the Discharge Monitoring report shall be submitted by the 25th of the month following the monitoring period end date.
8.18 "Monthly Average": means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.
8.19 "Municipal Facility": a treatment plant owned by a municipality or other government entity.
8.20 "National Pollutant Discharge Elimination System (NPDES)": the national program for issuing, modifying,

revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under section 307, 402, 318 and 405 of the Clean Water Act.

8.21 "Operator": for the purpose of this permit, means any person (an individual, association, partnership, corporation, municipality, state or federal agency) who has the primary management and ultimate decision-making responsibility over the operation of a facility or activity. The operator is responsible for ensuring compliance with all applicable environmental regulations and conditions.

8.22 "Once/Quarter": is defined as a measurement frequency where the sampling is made during a fixed calendar quarter or any part of the fixed calendar quarter. Fixed calendar quarters are: January through March, April through June, July through September, and October through December.

8.23 "Pollutant(s) of Concern": pollutants that are anticipated in the effluent at a facility of this nature including, but not limited to, those listed in Part 2 of this permit; pollutants which a facility must monitor as part of a Waste Load Allocation (WLA) due to a Total Maximum Daily Load (TMDL).

8.24 "Severe property damage": substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in productions.

8.25 "s.u." shall mean standard units.

8.26 "Total Suspended Solids (TSS)": the amount of solid material suspended in water, commonly expressed as a concentration, in terms of mg/L.

8.27 "Treatment works" means any devices and systems used in storage, treatment, recycling, and reclamation of municipal sewage and industrial wastes, of a liquid nature to implement section 201 of the Act, or necessary to recycle reuse water at the most economic cost over the estimated life of the works, including intercepting sewers, sewage collection systems, pumping, power and other equipment, and alterations thereof; elements essential to provide a reliable recycled supply such as standby treatment units and clear well facilities, and any works, including site acquisition of the land that will be an integral part of the treatment process or is used for ultimate disposal of residues resulting from such treatment.

8.28 "Upset": an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventive maintenance, or careless or improper operations.

8.29 "Waters of the State": all streams, lakes, marshes, ponds, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, which are contained within, flow through, or border upon this state or any portion of the state.

ADEQ
ARKANSAS
Department of Environmental Quality

Permit Tracking Number: 4674-WG-WR-6
AFIN: 41-00045

NOTICE OF COVERAGE (NOC)
FOR LAND APPLICATION OF WATER TREATMENT RESIDUALS GENERAL PERMIT NUMBER 0000-WG-WR

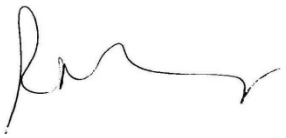
Texarkana Water Utilities
Attn: Joe Doss Phillips, P.E.
P.O. Box 2008
Texarkana, TX 75504

The Notice of Intent for coverage under the above General Permit was received, reviewed, and deemed complete on July 10, 2017. The facility has been assigned Permit Tracking Number **4674-WG-WR-6** and **AFIN 41-00045**. Any permit-related correspondence must include this Permit Tracking Number and AFIN. This NOC is issued to **Texarkana Water Utilities** in reliance upon the statements and representations made in the submittal for the following sites located in Little River County:

Owner Name	Section	Township	Range	Available Acres
Fawcett Land and Timber, LLC	26, 35	13S	29W	103
Fawcett Land and Timber, LLC	26, 35	13S	29W	192
Fawcett Land and Timber, LLC	36, 27, 34, 35	13S	29W	73
Fawcett Land and Timber, LLC	34, 35	13S	29W	154
Fawcett Land and Timber, LLC	19, 20, 29, 30	13S	29W	200
Fawcett Land and Timber, LLC	31, 6	11S & 12S	29W	160

The permittee is responsible for compliance with all applicable terms and conditions of this NOC, and a copy of the General Permit is enclosed. The Department has no responsibility for adequacy or proper functioning of the system.

Expiration Date: 3/31/2022



07/12/2017

Robert E. Blanz, PhD, P.E.
Acting Senior Operations Manager
Office of Water Quality

Coverage Date

AUTHORIZATION TO OPERATE A SYSTEM ASSOCIATED WITH THE LAND APPLICATION OF WATER TREATMENT RESIDUALS.

In accordance with the provisions of the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101, *et seq.*) and Ark. Code Ann. § 8-1-201, *et seq.*, operators that dispose of Water Treatment Residuals (WTR) from potable water treatment plants located within the State of Arkansas are authorized to implement and operate waste disposal systems through land application of the plant's residuals under the terms and conditions of this general permit.

An operator of a facility eligible for coverage under this general permit, or an entity working on behalf of such a facility, must submit a Notice of Intent (NOI) to the Arkansas Department of Environmental Quality (ADEQ) in order to operate under this permit. Upon approval of the NOI, ADEQ sends a cover letter (Authorization for Coverage with the permit tracking number) and a copy of the permit. The Authorization for Coverage includes ADEQ's determination that a facility is covered under this general permit and may specify alternate requirements outlined in the permit.

Operators who fail to submit a request for coverage under this permit are not authorized to operate under this permit.

Effective Date: April 1, 2017
Expiration Date: March 31, 2022

Caleb Osborne
Associate Director of Water Quality
Arkansas Department of Environmental Quality

9/23/16
Issue Date

PART I
PERMIT REQUIREMENTS

SECTION A: COVERAGE UNDER THIS PERMIT

1. PERMIT AREA

This permit includes all areas within the State of Arkansas.

2. DEFINITIONS

As used in this Permit, unless the context otherwise requires, the terms below will have the following definitions:

Act: The Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101, *et seq.*)

APC&EC: Arkansas Pollution Control and Ecology Commission.

ADEQ or Department: The Arkansas Department of Environmental Quality (ADEQ).

Director: The Director of the Arkansas Department of Environmental Quality or his/her designated representative.

Discharge: When used without qualification means the "discharge of a pollutant".

Extraordinary Resource Waters (ERW): Waters that have been given the designated use of Extraordinary Resource Waters by the Arkansas Pollution Control and Ecology Commission. This beneficial use is a combination of the chemical, physical, and biological characteristics of a waterbody and its watershed which is characterized by scenic beauty, aesthetics, scientific values, broad scope recreation potential, and intangible social values.

Ecologically Sensitive Waterbody (ESW): Waters that have been given the designated use of Ecologically Sensitive Waterbody by the Arkansas Pollution Control and Ecology Commission. This beneficial use identifies segments known to provide habitat within the existing range of threatened, endangered, or endemic species of aquatic or semi-aquatic life forms.

List of Impaired Waterbodies: Clean Water Act 303(d): a list of waterbodies within the state of Arkansas that are not current attaining all designated uses or are not meeting water quality standards.

NOI: Notice of Intent.

Natural and Scenic Waterways (NSW): Waters that have been given the designated use of Natural and Scenic Waterways by the Arkansas Pollution Control and Ecology Commission. This beneficial use identifies segments which have been legislatively adopted into a state or federal system.

NMP: Nutrient Management Plan

Nutrient Surplus Area: geographic area, declared by Ark. Code Ann. § 15-20-1104 and described more specifically in Subtitle II of Arkansas Natural Resources Commission Title 22, which has been determined to be an area in which the soil concentration of one or more nutrient is so high or the physical characteristics of the soil or area is such that continued application of the nutrient to the soil could

negatively impact soil fertility and the waters within the state.

Operator: Any person who has the primary management and ultimate decision-making responsibility over the operation of a facility or activity. The operator is responsible for ensuring compliance with all applicable environmental regulations and conditions.

Person: Natural person, corporation, organization, municipality, government or governmental subdivision or agency, public or private corporation, business trust, estate, trust, individual, partnership, association, or any other legal entity.

Pollution: Such contamination or other alteration of the physical, chemical, or biological properties of any waters of the state, or such discharge of any liquid, gaseous, or solid substance in any waters of the state as will, or is likely to, render the waters harmful, detrimental, or injurious to public health, safety, or welfare; to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses; or to livestock, wild animals, birds, fish, or other aquatic life.

Potable Water: Water that meets national drinking water standards making it safe for consumption.

Stormwater: Rainwater runoff, snow melt runoff, and surface runoff and drainage.

USGS: United States Geological Survey

Waters of the State: All streams, lakes, marshes, ponds, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, which are contained within, flow through, or border upon this state or any portion of the state.

Water Table: The surface between the zone of saturation and the zone of aeration and the surface of a body of unconfined ground water at which the pressure is equal to that of the atmosphere.

WMP: Waste Management Plan

Water Treatment Residuals (WTR): Solid waste products derived from the process of treating raw water sources into potable water.

3. ELIGIBILITY

This permit is applicable to all operators, new or existing, that intend to, or currently do, dispose of WTR from potable water treatment plants through land application methods. The WTR may be produced during the back flushing of filters or other treatments and processing of the raw water.

4. AUTHORIZATION

A. An operator of a facility eligible for coverage under this general permit, or an entity working on behalf of such a facility, must submit a NOI in accordance with Part I Section B of the permit in order to be covered by the terms and conditions of this general permit. The NOI must be submitted on forms developed and approved by ADEQ. A copy of the NOI form is available from the Department's website at the following address:
http://www.adeq.state.ar.us/water/

B. In accordance with Ark. Code Ann. § 8-1-106, *et seq*, a change in ownership or control of a land-application site requires the submission of an updated land application site list and a complete land use contract.

C. Upon review of any NOI submitted to the Department, the Director may deny coverage under this general permit, and require the submittal for an individual land application permit.
D. Except as provided in paragraph "E" below, a permit fee must accompany a Notice of Intent in accordance with APC&EC Regulation No. 9, as amended. An annual fee will apply to all facilities covered under the general permit in accordance with Regulation 9, as amended. Currently the annual fee is $500.00.
E. Fees need not be submitted with a Recertification NOI by the operators wishing only to renew coverage from the previous general permit or to transfer from an existing individual permit to the general permit, provided the permittee has paid the regular annual permit fee.

5. ACTIVITIES PROHIBITED UNDER THE TERMS OF THIS GENERAL PERMIT:

Under the provisions of the Arkansas Water and Air Pollution Control Act, as amended, the discharge of pollutants to the waters of the State from all land application of WTR is strictly prohibited under this permit.

6. CONTINUATION OF COVERAGE

If this permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with the Administrative Procedure Act and remain in force and effect. If granted permit coverage prior to the expiration date, in accordance with Part I.B.1.A, you will automatically remain covered by the continued permit until the earliest of:

i. Reissuance or replacement of this permit, at which time the operator must comply with the conditions of the new permit to maintain authorization to land apply WTR from potable water treatment plants; or
ii. Submittal of a request to terminate permit coverage; or
iii. Issuance of an individual permit for the operator's land application of WTR from potable water treatment plants; or
iv. A formal permit decision by the ADEQ to not re-issue this general permit, at which time you must seek coverage under an individual permit or other general permits, if available.

SECTION B. SUBMISSION OF THE NOTICE OF INTENT (NOI) FOR COVERAGE

1. NOTIFICATION REQUIREMENTS

A. Operators that currently dispose of WTR from potable water treatment plants through land application methods under the previous general permit desiring to retain coverage under the general permit must submit a completed Recertification NOI and WMP/NMP (if anything has changed) prior to the effective date of this permit.

B. Operators that currently dispose of WTR from potable water treatment plants through land application methods under an existing individual land application permit desiring coverage under this general permit must submit a completed NOI and WMP/NMP. The individual permit shall be considered terminated on the date of the Director's approval of the NOI.

C. Operators that dispose of WTR from potable water treatment plants desiring coverage under this general permit for the first time shall submit the NOI and completed WMP/NMP at least thirty (30) working days prior to the initiation of the land-application operations.

D. Facilities covered under this general permit shall retain a copy of this general permit at the facility's location.

E. The NOI shall be submitted to the Department containing, at a minimum, the following information:

i. Permittee name, address, and telephone number;
ii. Operator name, address, and telephone number;
iii. Consultant name, address, and telephone number, if applicable;
iv. Location and identification of the plant and land application sites: latitude and longitude (in degrees, minutes, seconds), County, Section, Range, and Township (including the 1/4 of the 1/4 position within the Section), and driving directions to the application sites;
v. Raw water source or sources such as wells, streams, lakes;
vi. Plant design capacity and current or expected average plant production rates expressed in million-gallons per day (MGD);
vii. Estimated amounts of dry residuals generated that will be stored or settled in tanks, ponds, etc. This calculation shall include the weight of chemicals added during the processing of the WTR (lime, soda ash, flocculants, filter aids, etc.) that will settle out. It shall also include the suspended solids in the raw water;
viii. Description and volume of WTR storage components;
ix. Maximum annual loading rate calculated from the 10 dry tons per acre per year limit;
x. Method for loading, transporting, and applying the WTR;
xi. Name and distance to the nearest impacted waterbodies;
xii. Nearest city, town, or community; and
xiii. Signature requirements

F. The WMP/NMP shall be submitted to the Department containing at a minimum the following information:

i. Description of the WTR generating process, including estimates of the daily and yearly volumes of WTR production.
ii. Description of WTR storage facilities, including location, volume, and construction drawings showing design details.
iii. Description of the land application sites and available acreage. The available acreage must account for all applicable buffer zones and slope limitations.
iv. Waste transportation and application methods.
v. Maximum Waste Application Rate Calculations: Application rates must be based on the 10 dry tons per acre limit and soil conditions.

vi. A copy (8 ½" X 11") of **both** the USGS topographic quad sheet map and county map showing the location of the facility, and the nearest waterbody, any impaired waterbody with impairments listed, ERW, ESW, NSW, water supplies, dwellings, and property lines. The actual dimensions of the land application area must be delineated on the map. All buffer zones must be shown. Areas with slopes exceeding 15% must be shown on map. Any public water source within a quarter mile of the land application site must be delineated. Any private well within 200 feet of the land application site must also be delineated. In addition, approximate soil series boundaries must be indicated. Any other information deemed relevant by the applicant or Department must be provided.

vii. WTR Analysis: The analysis must contain all parameters listed in Table I of Part II of the Permit.

viii. Soils Analysis: At least one (1) composite soil sample shall be taken for every forty (40) acres of the land application area. Methods of sampling must be in accordance with permit condition Part II.C.13. If more than one sample is taken, values for each sample must be reported. Soil samples must be analyzed for the parameters listed in Table II of Part II of the Permit. All results should be reported in mg/kg unless indicated otherwise.

ix. Executed land use agreements between the operator(s) and land owner(s). Should the land-application sites be owned by the permittee, a statement of ownership must be submitted.

x. If the land application site is located in the Nutrient Surplus Area, a copy of the approved phosphorus index must be submitted.

2. SIGNATURE REQUIREMENTS

The NOI shall be signed in accordance with the provisions of Part II.E.20 of the permit.

3. WHERE TO SUBMIT

The operator shall submit a complete signed NOI to the Department at one of the following addresses:

Arkansas Department of Environmental Quality
Water Division, No-Discharge Permits Section
5301 Northshore Drive
North Little Rock, AR 72218-5317

or

Water-permit-application@adeq.state.ar.us

PART II
PERMIT CONDITIONS

SECTION A. AUTHORIZED LAND APPLICATION

This general permit authorizes land application of water treatment residuals (WTR) in accordance with the permit conditions and the Department-approved NOI and WMP/NMP.

SECTION B. LIMITATIONS AND MONITORING REQUIREMENTS:

The following tables detail the constituent limits, monitoring frequencies, and the requirements for reporting results to ADEQ for each respective parameter listed in the table heading.

TABLE I			
Water Treatment Residuals Analysis			
Parameter	**Ceiling Concentrations (mg/kg)**	**Cumulative Pollutant Loading Rate (lb/ac)**	**Monitoring Frequency**
Arsenic	75	37	Annually, prior to the first application of the calendar year
Cadmium	85	35	
Copper	4300	1350	
Lead	840	270	
Mercury	57	15	
Molybdenum	75	Report	
Nickel	420	378	
Selenium	100	90	
Zinc	7500	2520	
Aluminum	Report	Report	
Iron	Report	Report	
Parameter	**Maximum Limit[1]**	**Reporting Units**	**Monitoring Frequency**
Conductivity	Report	µmhos/cm	Annually, prior to the first application of the calendar year
Total Solids		Percentage (%)	
Nitrates		mg/kg	
Total Phosphorus			
Total Potassium			
pH		s.u.	
Total WTR Applied	10	dry tons/ acre/ year	Each land application event

TABLE II		
Land Application Soils		
Parameter	**Limit (Reporting Units)**	**Monitoring Frequency**
Conductivity	Report (µmhos/cm)	Annually, prior to the first application of the calendar year
Cation Exchange Capacity	Report (meq/100g)	
pH[1]	Report (s.u.)	
Nitrate-Nitrogen	Report (mg/kg)	
Phosphorus		
Potassium		
Parameter	**Limit (Reporting Units)**	**Monitoring Frequency**
Arsenic	Report (mg/kg)	Once every five (5) years to submit with renewal application[2]
Cadmium		
Copper		
Lead		
Mercury		
Molybdenum		
Nickel		
Selenium		
Zinc		
Aluminum		
Iron		

[1]If the resulting pH is 5.7 or lower, lime must be applied in accordance with recommendations from the University of Arkansas Cooperative Extension Service.
[2]This soil analysis is only required if there has been application of WTR following the last soil analysis.

SECTION C. OPERATING REQUIREMENTS

1. The NOI and approved waste management plan/nutrient management plan (WMP/NMP) submitted for the implementation of the waste disposal operation are hereby incorporated into the general permit by reference. As a result, all provisions and information contained in these documents become enforceable conditions of this general permit. If the WMP/NMP is found to be inconsistent with the permit, the WMP/NMP shall be revised to conform to the permit conditions.

2. The permittee shall be responsible for ensuring that the WTR applicator (if different from the permittee) abide by all the permit stipulations.

3. Residuals must be land-applied in an even manner over the sites and only at the rates and on the areas specified in the approved WMP/NMP.

4. Land application of WTR is prohibited on slopes with a gradient greater than 15%.

5. Land application is prohibited when the soils are saturated, frozen, covered with ice or snow, or during precipitation events, or when precipitation is imminent (50% chance of precipitation predicted by the nearest National Weather Service station).

6. Residuals shall not be spread within 50 feet of property lines or rock outcrops; 100 feet of lakes, ponds, springs, streams, sinkholes, and wetlands; 200 feet of drinking water wells; or 300 feet of occupied buildings, Extraordinary Resource Waters, and Ecologically Sensitive Waters.

7. WTR can only be stored in accordance with the approved NOI and waste management plan/nutrient management plan. The utilization of improvised field storage sites or any other site not approved by the Department is prohibited.

8. Temporary transfer/storage points are allowed for WTR removed from the Water Treatment Plant's storage facilities provided that
   -not more than 20 cubic yards are stored at any time
   -the WTR is adequately contained by a berm or dike
   -no runoff takes place from the storage area
   -WTR storage is limited to thirty (30) calendar days
   The operation must have best management practices in place to contain and to remediate in the event of a leak and/or spill.

9. Storage or surface disposal of residuals in the 100-year flood plain is prohibited unless protected from flooding by berms, dikes, or other structures. The land-application of residuals at the rates established in the waste management plan/nutrient management plan shall not be interpreted or considered as surface disposal.

10. Disposal of the residuals shall not cause detriment to any endangered or threatened species of plant, fish, wildlife, or their critical habitat.

11. The Department has no responsibility for the adequacy or proper functioning of the waste disposal system.

12. If the analytical results for any parameter required to be sampled exceeds the ceiling concentration or limit specified in Section B Table I of Part II, the permittee shall cease land application of the WTR until additional analysis shows compliance with Section B Table I of Part II.

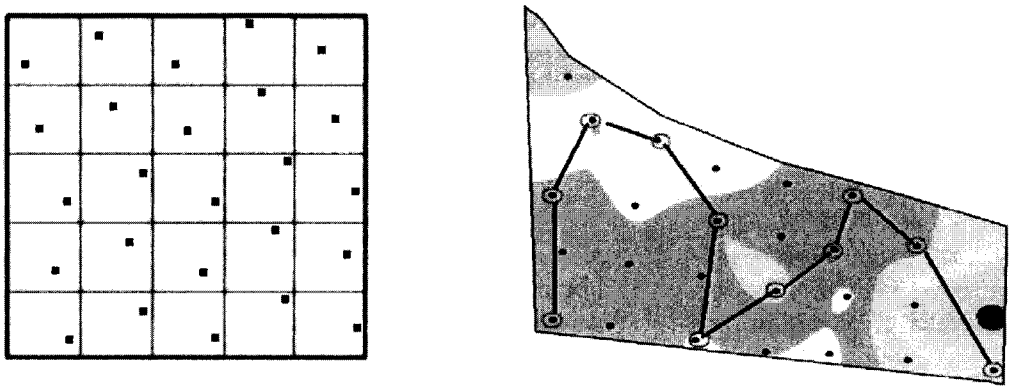
13. Each land application site shall have the soils tested for the parameters listed in Table II of Part II.B of this permit. Soil samples shall be collected according to the following method:

    a. Each sample area should represent less than or equal to 40 acres. These areas shall be identified on a site map. The areas shall remain the same between each sampling event.

    b. Mark the locations of the subsamples on the site map and submit the map with the annual report.

    c. Using a clean soil probe, soil auger, or spade, collect a minimum of 18 individual subsamples to a 4-inch depth per sample area in a random zigzag or grid pattern (see Fig 1 below) in accordance with the sampling locations on the site map. If using a spade, avoid wedge shaped samples.

    d. Combine individual subsamples in a clean plastic bucket and mix thoroughly. Place a subsample of the mixed composite in a clean soil box and label with the field name, sample area identification and permittee information. Subsamples shall be representative of the sampling zone only. Do not mix the samples between different sampling areas.



Grid Pattern Zig Zag

Figure 1. Soil sampling of Land Application Area Pattern

SECTION D. REPORTING REQUIREMENTS

1. The permittee will be responsible for the WTR and soil analyses, in accordance with the permit. All analyses submitted to the Department shall be completed by a laboratory certified by ADEQ under Ark. Code Ann. § 8-2-201 *et seq*. Analyses for the permittee's internal quality control or process control do not need to be performed by an ADEQ certified laboratory.

2. Annual Reports are due by May 1st of each year for the previous permitted months from January to December (i.e. Annual report is due on May 1st, 2012 for the 2011 calendar year). They are to include the following:

   i. land application dates,
   ii. land application locations,
   iii. quantities of WTR applied in dry tons per acre per year or in gallons per acre per year,
   iv. method(s) of application,
   v. amounts of each metal applied in lbs per acre,
   vi. total amount of each metal applied to date in lbs per acre,
   vii. copies of the WTR and soil analyses required in Part II Section B above.

   The analyses must be performed in accordance with EPA Document SW-846, "Test Methods for Evaluation of Solid Waste'" or other procedures approved by the Director and a statement confirming such must be included.

   Reports shall be submitted to the Permits Branch at the following address:

   Arkansas Department of Environmental Quality
   Water Division, No Discharge Permits Section
   5301 Northshore Dr.
   North Little Rock, Arkansas 72118-5317
   Fax (501) 682-0910

   Or

   Water-permit-application@adeq.state.ar.us

3. The Permittee shall maintain complete copies of all the reports including the WTR and soil analyses listed in Part II Section B for Department personnel review. In addition, the permittee must keep the land application log that includes records of field name or number (locations), application date, amount of WTR applied (in dry tons/acre-year or gallons/acre-year of WTR), methods of disposal, and identity of hauler for Department personnel review.

4. The permittee shall also maintain copies of the above records for Department personnel review at the WTR generating facility for a period of three (3) years.

SECTION E. STANDARD CONDITIONS

1. **Duty to Comply**

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Arkansas Water and Air Pollution Control Act and is grounds for civil and administrative enforcement action, for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

2. **Penalties for Violations of Permit Conditions**

The Arkansas Water and Air Pollution Control Act provides that any person who violates any provisions of a permit issued under the Act shall be guilty of a misdemeanor and upon conviction thereof shall be subject to imprisonment for not more than one (1) year, or a fine of not more than twenty-five thousand dollars ($25,000) or by both such fine and imprisonment for each day of such violation. Any person who violates any provision of a permit issued under the Act may also be subject to civil penalty in such amount as the court shall find appropriate, not to exceed ten thousand dollars ($10,000) for each day of such violation. The fact that any such violation may constitute a misdemeanor shall not be a bar to the maintenance of such civil action.

3. **Permit Actions**

A. This permit may be modified, revoked and reissued, or terminated for cause including, but not limited to the following:
   i. Violation of any terms or conditions of this permit;
   ii. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;
   iii. A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination;
   iv. Failure of the permittee to comply with the provisions of APCEC Regulation No. 9 (Permit fees)

B. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not suspend any permit condition.

4. **Civil and Criminal Liability**

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Any false or materially misleading representation or concealment of information required to be reported by the provisions of this permit or applicable state statutes or regulations which defeats the regulatory purposes of the permit may subject the permittee to criminal enforcement pursuant to the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101, et seq.).

5. **Oil and Hazardous Substance Liability**

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Clean Water Act and Section 106 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

6. **State Laws**

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties established pursuant to any applicable State law or regulation.

7. **Property Rights**

The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

8. **Severability**

The provisions of this permit are severable, and if any provision of this permit, or the application of any provisions of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

9. **Permit Fees**

The permittee shall comply with all applicable permit fee requirements for no discharge permits as described in APCEC Regulation No. 9 (Regulation for the Fee System for Environmental Permits). Failure to promptly remit all required fees shall be grounds for the Director to initiate action to revoke this permit.

10. **Proper Operation and Maintenance**

A. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

B. The permittee shall provide an adequate operating staff which is duly qualified to carryout operation, maintenance , and testing functions required to insure compliance with the conditions of this permit.

11. **Duty to Mitigate**

The permittee shall take all reasonable steps to prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment, or the water receiving the discharge.

12. **Removed Substances**

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of waste waters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering the waters of the State.

13. **Reporting of Violations and Unauthorized Discharges**

A. Any violations, which may endanger health or the environment, to this permit must be reported to the Enforcement Branch of the Department immediately (within 24-hours). Any leaks or seeps shall be reported to the Department and appropriately corrected. Any discharge from the waste storage system such as an overflow, a broken pipe, etc., shall be immediately (within 24-hours) reported to the Department.

B. The operator shall visually monitor and report immediately (within 24 hours) to the Enforcement Branch any unauthorized discharge from any facility caused by dike or structural failure, equipment breakdown, human error, etc., and shall follow up with a written report within five (5) days of such occurrence. The written report shall contain the following:

i. A description of the permit violation and its cause;
ii. the period of the violation, including exact times and dates;
iii. if the violation has not been corrected, the anticipated time it is expected to correct the violation; and
iv. steps taken or planned to reduce, eliminate, and prevent the recurrence of the violation.

C. Reports shall be submitted to the Enforcement Branch at the following address:

Arkansas Department of Environmental Quality
Water Division, Enforcement Branch
5301 Northshore Dr.
North Little Rock, Arkansas 72118-5317
Fax (501) 682-0910

Or

Water-enforcement-report@adeq.state.ar.us

14. **Penalties for Tampering**

The Arkansas Water and Air Pollution Control Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under the Act shall be guilty of a misdemeanor and upon conviction thereof shall be subject to imprisonment for not more than one (1) year or a fine of not more than ten thousand dollars ($10,000) or by both such fine and imprisonment.

15. **Inspection and Entry**

The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

A. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
B. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
C. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit,
D. Sample, inspect or monitor at reasonable times, for the purposes of assuring permit compliance any substances or parameters at any location.

16. **Planned Changes**

The permittee shall give notice and provide the necessary information to the Director for review and approval prior to any planned physical alterations or additions to the permitted facility.

17. **Anticipated Noncompliance**

The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

18. **Transfers**

The permit is nontransferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Act.

19. **Duty to Provide Information**

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit. Information shall be submitted in the form, manner and time frame requested by the Director.

20. **Signatory Requirements**

A. All applications, reports or information submitted to the Director shall be signed and certified. All permit applications shall be signed as follows:

i. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
   a. A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation: or
   b. The manager of one or more manufacturing, production, or operation facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

ii. For a partnership or sole proprietorship: by a general partner or proprietor, respectively; or

iii. For a municipality, State, Federal, or other public agency; by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive office of a Federal agency includes:
   a. The chief executive officer of the agency, or
   b. A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

B. All reports required by the permit and other information requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

i. The authorization is made in writing by a person described above.

ii. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

iii. The written authorization is submitted to the Director.

C. Any person signing a document under this section shall make the following certification: "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

21. **Availability of Reports**

Except for data determined to be confidential under the Arkansas Trade Secrets Act, Ark. Code Ann. § 4-75-601 et. seq., all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department of Environmental Quality. As required by the Regulations, the name and address of any permit applicant or permittee, permit applications, permits and effluent data shall not be considered confidential.

22. **Penalties for Falsification of Reports**

The Arkansas Air and Water Pollution Control Act provides that any person who knowingly makes any false statement, representation, or certification in any application, record, report, plan or other document filed or required to be maintained under this permit shall be subject to civil penalties and/or criminal penalties under the authority of the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101, et seq.).

23. **Applicable Federal, State, or Local Requirements**

Permittees are responsible for compliance with all applicable terms and conditions of this permit. Receipt of this permit does not relieve any operator of the responsibility to comply with any other applicable federal, state or local statute, ordinance policy, or regulation.

**FACT SHEET AND SUPPLEMENTARY INFORMATION
FOR GENERAL PERMIT NUMBER 0000-WG-WR**

THE LAND-APPLICATION OF WATER TREATMENT RESIDUALS

Information in this part is organized as follows:

1. Background
2. Major Changes from the Previous Permit
3. Description of Permit Coverage
4. Permit Limits and Basis
5. Sources

1. Background

The previous permit became effective on April 1, 2012 and will expire on March 31, 2017.

Pursuant to the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-203), the Arkansas Department of Environmental Quality (ADEQ) has the power to issue permits "to prevent, control or abate pollution." Therefore, any waste disposal system that does not discharge directly into waters of the State must be operated under the terms and conditions of a State Water Permit. Initially to satisfy the permit requirement, ADEQ issued individual permits for the land application of water treatment residuals (WTR). The Department determined that because of the similarity of the physical and chemical properties in WTR to issue a General Permit for the land application of WTR.

The violation of any condition of a general permit constitutes a violation of Ark. Code Ann. § 8-4-217 and may subject the permittee to penalties and revocation of coverage under the general permit. Upon issuance of the final general permit for the land application of WTR, operators that are considered qualified for coverage under this general permit must submit a written Notice of Intent (NOI) to the Director for coverage under the general permit.

2. Major Changes from the Previous Permit

2.1 Added the requirement for a Nutrient Management Plan for the Nutrient Surplus Area in accordance with Ark. Code Ann. §15-20-1106.
2.2 Removed conductivity, sodium absorption ratio, sodium, calcium, and magnesium from the soil and WTR analysis.
2.3 Added the monitoring requirement for molybdenum to the land application site analysis.

3. Description of Permit Coverage

3.1 Authorization. The general permit provides coverage for operators that dispose of WTR, from potable water treatment plants, through land application methods. This fact sheet explains the Department's decisions on limits for the pollutant levels in WTR, loading rates, the requirements for soil monitoring, and the regulatory and technical bases for those decisions. The limits are imposed to protect the soil from degradation at the land application site and to protect waters of the state from pollutant migration.

3.2 Notification Requirements. To obtain coverage under this general permit, a Recertification NOI or a NOI and waste management (WMP) plan/ nutrient management plan (NMP) must be submitted in accordance with Part I.B.

4. Permit Limits and Basis

ADEQ has made a determination to reissue a general permit for the disposal of WTR via land application. Permit requirements and conditions are based on the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. 8-4-101 *et seq.*, and Ark. Code Ann. § 8-4-201 *et seq.*) and regulations promulgated there to.

Specific permit conditions and limits' rationalization and sources are listed as follows:

Limits and reporting requirements for arsenic, cadmium, copper, lead, mercury, molybdenum, nickel, selenium, and zinc in the WTR

The associated limits and cumulative pollutant loading rates are adopted from EPA's risk assessment Federal Part 503 rule that governs the land application of biosolids. This assessment considered 14 different pathways of exposure to highly exposed individuals, including humans, animals (including small organisms), and plants. Although these limits were designed for biosolids, they provide general guidelines for minimizing the potential for accumulation of metals in soils to concentrations that could have adverse effects on the environment caused by land application of WTR.

Reporting requirements for aluminum and iron in the WTR and soils

Alum and ferric flocculants are commonly used in the drinking water treatment process. As a result, WTR may contain high concentrations of aluminum and iron. The EPA currently does not have data concerning the application rates of aluminum and iron in WTR. However, because the application of WTR has the potential to considerably alter the soil's concentrations of these elements, the Department requires that concentrations and total mass of the elements applied be monitored. A review of previous permit records has shown that aluminum concentrations in the soil are not increasing at a rate that requires annual monitoring, therefore the Department has reduced the monitoring frequency to once every five (5) years. In order to ensure that the aluminum and iron concentrations are not increasing, the Department will require the permittee to sample the WTR and test for these parameters on an annual basis.

Limit of the total mass of WTR applied

Annual nutrient loading rates are usually the limiting application rate in land application operations. However, because WTR often contain trace amounts of nutrients the total mass of WTR applied is limited in order to prevent excessive concentrated disposal. Concentrated disposal will inhibit timely drying of the residuals. Excessive loading of WTR can also bind up nutrients in the soil impeding plant growth. A 1991 article form the American Water Works Association Journal titled "Agronomic Effects of Land Application of Water Treatment Sludges" states application rate of 10 dry tons per acre is still protective of the environment. Based on this info, the Department has set the limit of 10 dry tons per acre per year.

Reporting requirements for percent total solids of the WTR

This parameter is required to convert between a wet and dry basis.

Reporting requirements for nitrates, total phosphorus, and total potassium in the WTR

These constituents are required for plant growth and monitoring is used to measure the quantities provided through land application of the WTR.

Removal of the sodium adsorption ratio (SAR), magnesium, calcium, and sodium of the WTR

The Department included these monitoring parameters in the previous permit in order to obtain data and to assess the environmental impact of these parameters. Based on the analysis submitted during the previous permit cycle, the water treatment residuals had an average SAR of 1.85 and the highest reported SAR of 5.4. In accordance with Natural Resources Conservation Service Code 521A, the SAR of 6 is considered to be a low sodium hazard. Since both the average and highest SAR for the WTR came back below 6, the Department has removed the SAR, magnesium, calcium, and sodium monitoring requirement from the permit.

Removal of conductivity of the soils

The Department included these monitoring parameters in the previous permit in order to obtain data and to assess the environmental impact of these parameters. Based on the analysis submitted during the previous permit cycle, the soil analyses had an average conductivity of 92.3 µmhos/cm and the highest report conductivity of 250 µmhos/cm. In accordance with *Soils: an Introduction to Soils and Plant Growth*, a conductivity of 4,000 µmhos/cm or less is considered normal. Since both the average and highest conductivity for the soil came back below 4,000 µmhos/cm, the Department has removed the conductivity monitoring requirement from the permit.

Reporting requirements for arsenic, cadmium, copper, lead, mercury, molybdenum, nickel, selenium, and zinc in soils

The list of metal cations was adopted from 40 CFR Part 503 for the land application of biosolids. Limits were not established due to the variability in analyzing the concentrations of these metals. Reporting conditions are required as verification that metals from land application of WTR or other sources are not being applied at a rate that causes accumulation of metals to levels that could have adverse effects on the environment. The reporting frequency has been reduced to once every five years after a review of lab analysis indicated that the metals in the soil are not increasing, or are not increasing at a rate that requires annual monitoring. If results indicate that soil concentrations have increased, the Department may require cessation of land application activities, further testing, and/or remediation activities.

Reporting requirements for cation exchange capacity, nitrate nitrogen, phosphorus, and potassium in the soil

These parameters are indicators of soil quality. The chemical condition of soil affects soil-plant relations, water quality, buffering capacities, availability of nutrients and water to plants and other organisms, mobility of contaminants, and some physical conditions. (USDA Natural Resources Conservation Service "Indicators for Soil Quality Evaluation" April 1996.) Reporting conditions are required as verification that problems from over-application of biosolids or other sources are not occurring. If results indicate that soil concentrations have increased to levels that have an adverse effect on the environment, the Department may require cessation of land application activities, further testing, and/or remediation activities.

Reporting requirements for pH of the soil

Soil pH must be monitored to ensure compliance with Part II, Table II of the permit. The acidic limit of 5.7 s.u. was adopted from University of Arkansas Cooperative Extension Service to maintain an optimal pH for plant growth. Also when the pH becomes too low, heavy metals are more soluble and therefore more susceptible to leaching to the groundwater.

Maximum slopes of 15% for application of WTR

Topography of the land application area affects the potential for runoff and erosion. The maximum slope limit of 15% was adopted from American Water Works Association's "Land Application of Water Treatment Sludges: Impact and Management."

Buffer distances

Minimum buffer distances are required between land application areas and areas that may be vulnerable to water pollution and to minimize the risk of nutrients or pollutants from leaving the field and reaching surface waters. Buffer distances were adopted from APC&EC Regulation 5.406 and best engineering judgment.

Standard Conditions

The conditions applicable to all no-discharge permits have been included in this permit based on best engineering judgment and 40 CFR Part 122.

5. Sources

The following Sources were used to write the permit:

a. Regulation No. 8, Administrative Procedures, as amended.
b. Regulation No. 9, Fee System for Environmental Permits, as amended.
c. Regulation No. 5, Liquid Animal Waste Management Systems, as amended.
d. 40 CFR Parts 122 and 503.
e. Arkansas Water and Air Pollution Control Act, Ark. Code Ann. § 8-4-101, et seq.
f. Arkansas Trade Secret Act, Ark. Code Ann. § 4-75-601, et seq.
g. USDA Natural Resources Conservation Service "Indicators for Soil Quality Evaluation," April 1996
h. American Water Works Association (AWWA) "Land Application of Water Treatment Sludges: Impact and Management"
i. EPA Technology Transfer Handbook "Management of Water Treatment Plant Residuals"

RESPONSE TO COMMENTS
FINAL PERMITTING DECISION

Permit No.: 0000-WG-WR

Applicant: Land Application of Water Treatment Residuals

Prepared by: Colby Ungerank

The following are responses to comments received regarding the draft permit number above and are developed in accordance with regulations promulgated at 40 C.F.R. § 124.17 , APCEC Regulation No. 8, Administrative Procedures and A.C.A. 8-4-203 e(2).

Introduction

The above permit was submitted for public comment on May 31, 2016. The public comment period ended on June 30, 2016. This document contains a summary of the comments that the ADEQ received during public comment period. A summary of the changes can be found on the last page of this document.

	Commenter	# of comments raised
1.	Colene Gaston, Beaver Water District	13

Comment 1 **Draft Permit Cover Page:** The cover page states the effective date is April 1, 2018, and that the expiration date is March 31, 2023. Shouldn't the effective date be April 1, 2017, since the Current Permit expires March 31, 2017? That would also make the expiration date March 31, 2022.

Response: The Draft Permit that was mailed to all of the permittees had a typo on the effective date and expiration date. However, the Draft Permit that was public noticed and available on the Department's website has the correct effective date of April 1, 2017 and expiration date of March 31, 2022. The dates will be corrected on the Final Permit.

Comment 2 **Draft Permit Cover Page and Draft Permit Pagination:** It says, "Page 1 of Part I" on the cover page. Presumably this is an error as the next page of the Draft Permit says the same thing. In addition, the first page of Part II of the Draft Permit says "Page 6 of Part II." In fact, that is either the seventh (if one counts the cover page) or sixth page of the entire Draft Permit and not the sixth page of Part II. BWD recommends that the pagination be changed to be sequential for the entire Draft Permit, including the cover page (*e.g,* "Page 1 of 15," and so on). This will make it easier for permittees and the public to locate particular provisions in the permit.

Response: The Department acknowledges this comment and has corrected the page numbering. The page number is removed from the Cover Page and is in sequential order for each section.

Comment 3 **Draft Permit Part I.B.1.E.ix (on "Page 4 of Part I"):** This provision requires that the Notice of Intent (NOI) include information on the "Maximum annual loading rate calculated from the 10 dry tons per acre per year limit." BWD questions the scientific basis for the ten (10) dry tons per acre per year limit and requests that a review of the limit be undertaken. See Comment 10 below.

Response: See the Response to Comment 10.

Comment 4 **Draft Permit Part I.B.1.F.v (on "Page 5 of Part I"):** This provision requires that the Waste Management Plan (WMP)/Nutrient Management Plan (NMP) include the following information: "Maximum Waste Application Rate Calculations: Application rates must be based on the 10 dry tons per acre limit and soil conditions." BWD questions the scientific basis for the ten (10) dry tons per acre per year limit and requests that a review of the limit be undertaken. See Comment 10 below.

Response: See the Response to Comment 10.

Comment 5 **Draft Permit Part I.B.1.F.viii (on "Page 5 of Part I"):** This provision provides that, "Methods of sampling must be in accordance with permit condition Part II.C.12." BWD believes that the sampling methodology is found at Part II.C.13.

Response: The Department acknowledges this comment and has corrected the reference in Part I.B.1.f.viii.

Comment 6 **Draft Permit Part I.B.2 (on "Page 5 of Part I"):** This provision provides that, "The NOI shall be signed in accordance with the provisions of Part II.E.21 of the permit." BWD believes that the signatory requirements are found at Part II.E.20.

Response: The Department acknowledges this comment and has corrected the reference in Part I.B.2.

Comment 7 **Draft Permit Part II.B, Table I, Headings (on "Page 6 of Part II"):** There appears to be a typographical error in the second row of the table headings (it says, "Water Treatment Residuals Analysis [MB1]").

Response: The Department acknowledges this comment and corrected the typo.

Comment 8 **Draft Permit Part II.B, Table I, Footnote 1 (on "Page 6 of Part II"):** Following the table headings "Ceiling Concentrations" and "Maximum Limit" there is a superscript for footnote 1. Footnote 1 states, "Refer to Condition No. 4 of Part II of the permit." There is no such provision. There are provisions at Part II.C.4, Part II.D.4, and Part II.E.4 of the Draft Permit, but it is unclear which, if any, of these provisions applies. Also, this footnote is not in the Current Permit.

Response: The Department acknowledges this comment and has removed the footnote.

Comment 9 **Draft Permit Part II.B, Table I, WTR Monitoring Requirements for Aluminum and Iron (on "Page 6 of Part II"):** BWD questions whether continuing to require annual monitoring for iron and aluminum *in the WTR* is necessary. Monitoring *of the WTR once every five (5) years*, as is required for monitoring for iron and aluminum *in the soil* under both the Current Permit and the Draft Permit, would seem to be sufficient. ADEQ now has at least two permit cycles worth of annual analyses for iron and aluminum in WTR, and Page 2 of the Fact Sheet for the Draft Permit indicates that the permit records do not show any problem with resultant soil concentrations.

Response: The Department acknowledges this comment and understands the position of the commenter; however, the monitoring of requirements of iron and aluminum will not change at this time. Alum and ferric flocculants are commonly used in the drinking water treatment process. As a result, WTR may contain high concentrations of aluminum and iron. The monitoring requirement of iron and aluminum in the WTR was place in the permit to keep track of the correlation between the WTR and the soil. The annual monitoring of these parameters is required in order to get an accurate count of the amount of iron and aluminum is land applied.

Comment 10 **Draft Permit Part II.B, Table I, "Total WTR Applied" Limit (on "Page 6 of Part II"):** BWD questions the scientific basis for the ten (10) dry tons of WTR per acre per year limit and believes that a review and reconsideration of the limit is warranted during the 2017 to 2023 permit cycle. ADEQ contends on Page 2 of the Fact Sheet for the Draft Permit that the limit is necessary to prevent "excessive concentrated disposal." The only technical support that ADEQ provides in the Fact Sheet for the Draft Permit is a 1991 article titled "Agronomic Effects of Land Application of Water Treatment Sludges" in the American Water Works Association (AWWA) Journal (hereinafter referred to as the "AWWA Article") (copy attached). ADEQ simply notes at page 2 of the Fact Sheet that the AWWA Article "states [sic] application rate of 10 dry tons per acre is still protective of the environment." The cited article, however, does not say or even imply that land application of WTR at a rate higher

than ten (10) dry tons per acre is excessive and will cause environmental degradation. The AWWA Article does state on page 128 under the section titled "Impact on soil fertility" that ". . . levels of N and other nutrients in the grain and leaves of corn and soybeans were not significantly changed for applications of up to 20 tons/acre of an alum sludge containing 0.47 percent N."

ADEQ's own review of the WTR and soil data submitted by the permittees under the previous State General Permits 0000-WG-WR with a limit of ten (10) dry tons WTR per acre per year shows no environmental impact from years of land application of WTR. For example, page 3 of the Fact Sheet for the Draft Permit states, ". . . a review of lab analysis indicated that the metals in the soil are not increasing, or not increasing at a rate that requires annual monitoring."

Beginning in approximately 1995, BWD in conjunction with ADEQ undertook a land application of WTR study. BWD's records of the study are minimal, but it appears that WTR were land applied at rates of twenty-six to twenty-seven (26 to 27) dry tons per acre per year for several years without any adverse effects. See attached letter dated April 10, 1997, from Alan Fortenberry, BWD, to Henry Insua, ADEQ. Based on the study results, the ten (10) dry tons per acre per year limit originally included in the WTR land-application permit by Mr. Henry Insua of ADEQ was an overly conservative limit.

The AWWA Article cited by ADEQ was based on a project that produced a 1990 AWWA Report, "Land Application of Water Treatment Sludges: Impact and Management" (hereinafter referred to as the "AWWA Report") (copy attached). The AWWA Report provides further support for an application rate higher than the ten (10) dry tons per acre per year limit. In a discussion of hydrous metal oxides, the AWWA Report on page 9 states:

> Buildup of Al or Fe due to extended applications of WTS [water treatment sludge] is not expected to cause any serious problem. It is nonetheless informative to make a quick calculation regarding the increase in Al after addition of a typical alum sludge (10% Al by dry weight), *at reasonable application rates* (20 years at 2% loading or ***20 tons per acre per year for 20 years***), to as [sic] soil containing 4% Al. The Al concentration would be 5.7% after the 20 years of application or an increase of 1.7% over the background level. This variation is well within the range of natural variation in native soils. [Emphasis added].

Further, the AWWA Report's discussion of the agricultural use of WTR in the AWWA Report at page 58 provides:

Too much sludge may be detrimental to plant growth due to tie-up of phosphorus. The idea behind application of water treatment plant sludges on agricultural land is to spread *at judicious rates* ***(less than 50 dry tons per acre)***, and add supplemental lime and fertilizers to promote a healthy crop. *For land reclamation projects, higher rates (100-300 dry tons/acre)* can be applied depending on site-and WTS-specific considerations. [Emphasis added].

The AWWA Report, therefore, provides support for a limit of up to fifty (50) dry tons per acre per year, and even more justification for a limit of up to twenty (20) dry tons per acre per year. ADEQ should keep in mind that whatever the limit is, as is common practice among responsible wastewater dischargers, prudent permittees will endeavor to land apply at a rate that is safely below the maximum.

A large number of factors can affect how much WTR a permittee needs to apply in a given year and several of these factors are outside the control of the permittee. For example, significant storm events can result in exponential increases in the turbidity of the raw water being treated, which then causes corresponding increases in the amount of WTR produced. In some parts of the state, including Northwest Arkansas, finding land on which to apply WTR is becoming increasingly difficult. Following periods of high raw water turbidity, the problem is further amplified.

For the reasons outlined above, there is scientific justification for a higher limit than ten (10) dry tons per acre per year. *BWD, therefore, requests that ADEQ partner with BWD and other interested water utilities to study the issue so that a more appropriate limit can be included in the 2023 renewal general permit. We look forward to working with ADEQ in the near future to develop a plan to make that happen.*

Response: The Department acknowledges this comment and understands the position of the commenter. The Department is willing to study the loading rate of the WTR and review any research conducted by interested water utilities during the next renewal cycle.

Comment 11 **Draft Permit Part II.C.5 (on "Page 7 of Part II"):** The Draft Permit prohibits land application "when precipitation is imminent (50% chance of precipitation predicted by the nearest National Weather Service Station)." BWD objects to the parenthetical, which defines imminent precipitation as being a fifty percent chance of precipitation predicted by the nearest National Weather Service. Such predictions are imprecise as to location and timing, among other things. Making the determination as to when

precipitation is imminent is best left to the judgment of those on location at the time of the planned land application.

Response: When the nearest National Weather Service station predicts a 50% chance of precipitation, the Department believes there is a good chance of rain which could cause pollution to the waters of the State. In order to protect waters of the State, additional measures must be taken to ensure contamination via runoff is prevented. Therefore, the Department adapted the associated condition from APC&EC Regulation No. 5.406(B) that governs the liquid animal waste management systems. Land application of WTR is prohibited during a precipitation event or when significant precipitation is imminent. When land applying WTR there is a critical time to prevent runoff to the waters of the State, which is during land application and right after land application before the WTR has had time to absorb into the soil or to be incorporated into the soil. In order to protect the environment, the Department defined the word "imminent" to mean a 50% chance of precipitation predicted by the nearest National Weather Service station.

Comment 12 **Draft Permit Part II.C.12 (on "Page 8 of Part II"):** There should be a period instead of a comma at the end of the sentence.

Response: The Department acknowledges this comment and has corrected the typo.

Comment 13 **Draft Permit Part II.E.13.A (on "Page 13 of Part II"):** The first sentence of this provision requires that "any violations" must be reported within 24 hours. This requirement to report immediately seems overly broad. It would apply to minor paperwork or other violations that have no detrimental impact on the environment, as well as violations that are not immediately ascertainable.

Response: The Department acknowledges this comment and changed the condition to state the following:

> Any violations, *which may endanger health or the environment*, to this permit must be reported to the Enforcement Branch of the Department immediately (within 24-hours). Any leaks or seeps shall be reported to the Department and appropriately corrected. Any discharge from the waste storage system such as an overflow, a broken pipe, etc., shall be immediately (within 24-hours) reported to the Department.

Summary of Changes

Part	Draft Permit (~~strikethrough~~)	Final Permit (*italics*)
Cover Page	Effective Date: April 1, 201~~8~~ Expiration Date: March 31, 202~~3~~	Effective Date: April 1, 201*7* Expiration Date: March 31, 202*2*
Cover Page	~~Page 1 of Part I~~	*Removed*
I.B.1.F.viii	Methods of sampling must be in accordance with permit condition Part II.C.1~~2~~.	Methods of sampling must be in accordance with permit condition Part II.C.*13*.
I.B.2	The NOI shall be signed in accordance with the provisions of Part II.E.2~~1~~ of the permit.	The NOI shall be signed in accordance with the provisions of Part II.E.2*0* of the permit.
II.B Table I	Water Treatment Residuals Analysis ~~[MB1]~~	Water Treatment Residuals Analysis
II.B Table I	Refer to Condition No. 4 of Part II of the permit.	*Removed*
II.C.12	If the analytical results for any parameter required to be sampled exceeds the ceiling concentration or limit specified in Section B Table I of Part II, the permittee shall cease land application of the WTR until additional analysis shows compliance with Section B Table I of Part II~~.~~	If the analytical results for any parameter required to be sampled exceeds the ceiling concentration or limit specified in Section B Table I of Part II, the permittee shall cease land application of the WTR until additional analysis shows compliance with Section B Table I of Part I*I*.
II.E.13.A	Any violations to this permit must be reported to the Enforcement Branch of the Department immediately (within 24-hours). Any leaks or seeps shall be reported to the Department and appropriately corrected. Any discharge from the waste storage system such as an overflow, a broken pipe, etc., shall be immediately (within 24-hours) reported to the Department.	Any violations, *which may endanger health or the environment,* to this permit must be reported to the Enforcement Branch of the Department immediately (within 24-hours). Any leaks or seeps shall be reported to the Department and appropriately corrected. Any discharge from the waste storage system such as an overflow, a broken pipe, etc., shall be immediately (within 24-hours) reported to the Department.

PERMIT TO
APPROPRIATE STATE WATER

APPLICATION NO. CA-57 PERMIT NO. CP-57 TYPE: Contractual

Permittee	: International Paper Company	Address	: P. O. Box 2328 Mobile, Alabama
Received	: July 29, 1968	Filed	: August 5, 1968
Granted	: August 5, 1968	Counties	: Bowie and Cass
Watercourse	: Sulphur River	Watershed	: Sulphur River

WHEREAS, the Texas Water Rights Commission has duly considered the application and finds that jurisdiction has been established;

NOW, THEREFORE, this permit to use the public waters of the State of Texas is hereby issued to International Paper Company based on a contract with the City of Texarkana, Texas, owner of Permit No. 1563, as amended by Permits Nos. 1563a and 1563b, which authorize the use of water granted by this permit. The terms and conditions of this permit are as follows:

1. IMPOUNDMENT: Lake Texarkana, authorized by Permit No. 1563, as amended.

2. USE: Permittee is authorized to divert and use not to exceed 120,000 acre-feet of water per annum from Lake Texarkana for industrial purposes in Cass County, Texas.

3. DIVERSION: Diversion of not to exceed 40.3 mgd at a maximum rate of 28,000 gpm (62 cfs) at a point on the right bank of Lake Texarkana described in Permit No. 1563b as diversion point No. 2, and by release through the outlet facilities of Texarkana Dam into the Sulphur River for conveyance by the bed and banks of Sulphur River to place of use downstream for a combined total diversion not to exceed 105.4 mgd.

4. TIME LIMITATIONS: Construction or installation of all works herein authorized or required shall be commenced within ninety (90) days and completed within two (2) years, unless extended by the Commission.

5. SPECIAL CONDITIONS:

   (a) This permit shall expire and become null and void upon termination of the contract between the permittee and the City of Texarkana, Texas.

   (b) Permittee is authorized to construct and maintain one or more off-channel reservoirs for use as oxidation ponds from whence return flows will be released into Baker Slough and then into the Sulphur River, and is authorized to include a total impounding capacity in such reservoirs of not more than 9,000 acre-feet.

   (c) The City of Texarkana will construct, operate and maintain the diversion facilities. Final plans and specifications for the construction of diversion facilities will be approved by the Commission under the provisions of Permit No. 1563b.

(d) The use of not to exceed 120,000 acre-feet of water per annum for industrial purposes authorized by Paragraph 2 above, is limited exclusively to permittee's industrial plant as shown in the plans and specifications filed with the application.

(e) Prior to the diversion of any water, permittee shall furnish to the Commission, for approval, the following items:

(1) Proposed schedule of diversion of water from Texarkana Reservoir;

(2) Plans for terminal storage and use of water in mill;

(3) Methods for measuring and accounting daily volume of diversion and return flow; and

(4) Methods for measuring and accounting daily volume of water released through the dam into Sulphur River.

(f) Permittee shall report to the Commission all water received under the terms of this permit from the pipeline of the City of Texarkana. The City of Texarkana shall report to the Commission all water diverted from Texarkana Reservoir and all water released under the terms of this permit through the outlet facilities of Texarkana Dam.

(g) Water shall not be diverted or used under this permit until such time as a copy of a permit issued by the Texas Water Quality Board is filed with the Commission and executed copies of all contracts with the City of Texarkana are filed with the Commission.

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

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

This permit is issued subject to the rules and regulations of the Texas Water Rights Commission and to its right of continual supervision.

Joe D. Carter, Chairman

O. F. Dent, Commissioner

Date Issued:

August 5, 1968

W. E. Berger, Commissioner

Attest:

Audrey Strandtman, Secretary

AMENDMENT TO
PERMIT TO
APPROPRIATE STATE WATER

APPLICATION NO. CA-57A PERMIT NO. CP-57A TYPE: Amendment

Permittee	: International Paper Company	Address	: P. O. Box 2328 Mobile, Alabama
Received	: July 20, 1976	Filed	: October 25, 1976
Granted	: October 25, 1976	County	: Cass
Watercourse	: Lake Texarkana	Watershed	: Sulphur River Basin

WHEREAS, the Texas Water Rights Commission finds that jurisdiction of the application is established; and

WHEREAS, a public hearing has been held and International Paper Company named as a party; and

WHEREAS, no person appeared to protest the granting of the application; and

WHEREAS, the issuance of this permit granting this application is not adverse to any party; and

WHEREAS, Contractual Permit No. 57, issued on August 5, 1968, in part authorizes applicant to maintain one or more off-channel reservoirs with a total impounding capacity of not to exceed 9000 acre-feet as oxidation ponds for treatment of the water purchased from the City of Texarkana, Texas (Permit No. 1563B), and used for industrial purposes; and

WHEREAS, applicant has requested an amendment to Contractual Permit No. 57 to authorize an increase in the authorized storage capacity of the oxidation ponds from 9000 to 30,000 acre-feet.

NOW, THEREFORE, paragraph 5(b) of Contractual Permit No. 57 is amended as follows:

SPECIAL CONDITIONS

In lieu of the previous authorization to include a total capacity in the off-channel reservoirs (oxidation ponds) of not more than 9000 acre-feet, permittee is authorized to include a total impounding capacity of not more than 30,000 acre-feet.

This amendment is issued subject to all terms, conditions and provisions contained in Contractual Permit No. 57, except as herein amended.

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

Permittee 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 Water Rights Commission and to its right of continual supervision.

TEXAS WATER RIGHTS COMMISSION

/s/ Joe D. Carter

Joe D. Carter, Chairman

/s/ Joe R. Carroll

Joe R. Carroll, Commissioner

/s/ Dorsey B. Hardeman

Dorsey B. Hardeman, Commissioner

Date Issued:

October 28, 1976

(SEAL)

Attest:

/s/ Mary Ann Hefner

Mary Ann Hefner, Secretary

E 6998

VOL 1 PAGE 27

AMENDMENT TO
PERMIT TO
APPROPRIATE STATE WATER

APPLICATION NO. CA-57B PERMIT NO. CP-57B TYPE: Contractual

Permittee :	International Paper Company	Address :	3000 Knight Office Place, Suite 100 Shreveport Louisiana 71105
Received :	July 29, 1982	Filed :	November 8, 1982
Granted :	November 8, 1982	County :	Cass
Watercourse:	Sulphur River	Watershed:	Sulphur River Basin

WHEREAS, the Texas Water Commission finds that jurisdiction of the application is established; and

WHEREAS, Contractual Permit No. CP-57, as amended, authorizes permittee to use not to exceed 120,000 acre-feet of water per annum for industrial purposes and limits such use to permittee's industrial plant area as shown in plans and specifications filed with the application. Additionally, it authorizes off-channel storage capacity of 30,000 acre-feet of water; and

WHEREAS, permittee has requested an amendment to Contractual Permit No. CP-57, as amended, to redefine the plant area so as to include an additional 11.2 acre-foot capacity off-channel storage pond; and

WHEREAS, this additional off-channel impoundment will not increase the permittee's authorization to store up to 30,000 acre-feet of water.

NOW, THEREFORE, Paragraph 5(d) of Contractual Permit No. CP-57, as amended, is amended as follows:

5. SPECIAL CONDITIONS

* * *

(d) The use of not to exceed 120,000 acre-feet of water per annum for industrial purposes authorized by Paragraph No. 2 is limited exclusively to permittee's industrial plant area and wet log storage area as shown on the plat filed with the Department on May 25, 1982.

This amendment is issued subject to all terms, conditions and provisions contained in Contractual Permit No. CP-57, as amended, except as herein amended.

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

Permittee 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.

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This amendment is issued subject to the Rules of the Texas Department of Water Resources and to the right of continual supervision of State water resources exercised by the Department.

TEXAS WATER COMMISSION

Lee B. M. Biggart, Chairman

Felix McDonald, Commissioner

John D. Stover, Commissioner

Date Issued:

November 18, 1982

Attest:

Mary Ann Hefner, Chief Clerk

THE STATE OF TEXAS
County of Cass

I, Odelia Womack, Clerk of the County Court of said County, do hereby certify that the above instrument of writing, with its certificate of authentication, was filed for record in my office, the 3 day of December 19 82, at 8:48 o'clock A. M., and duly recorded the 3 day of December 19 82, at -- o'clock -- M., in the Water Right Permit records of Cass County in Vol. 1, on page 27

WITNESS MY HAND and seal of the County Court of said County, at my office in Linden, the day and year last above written.

ODELIA WOMACK
Clerk County Court, Cass County, Texas By Lydia Awd Deputy.

APPENDIX J

Water Conservation and Drought Contingency Plans

SUSAN ROTH
water and wastewater consulting

CITY OF DE KALB

~~~~~~~~~~The Friendly City

Dennis Wandrey, Mayor
Abbi Capps, City Administrator

August 27, 2018

Mr. Richard LeTourneau, Region D Chair, richardoillet@gmail.com
Walt Sears, Region D Administrator, netmwd@aol.com
Ron Ellis, TWDB Region D Liaison, ron.ellis@twdb.texas.gov
Liz Fazio Hale, Riverbend Water Resource District Executive Director/CEO, lizfazio@rwrd.org

(Plan delivered by email)

Re: ***Water Conservation Plan Transmittal***
City of DeKalb

Dear Team:

By this email, I am forwarding you a copy of our Water Conservation Plan.

DeKalb purchased 71.4 million gallons from the Texarkana Water Utilities during 2017. We sold 51.4 millions of gallons thus leaving 20 million gallons (28% of total purchase) as unmetered or lost. Our goal is to reduce or account for unmetered water used to 10.3 millions of gallon per year (20%) by 2022 and to further reduce these unmetered losses to 7.7 millions of gallons (15% of purchase) by 2027. These goals will be updated as we understand whether we have actual losses (leaks, breaks, etc.) or unmetered losses (flushing, irrigation, etc.).

An important part of our plan relates to the provision of educational, leak detection/repair, meter replacement and other listed programs. We have not yet begun these due to the newness of our plan. We are interested in any help you have regarding these program opportunities. We are reaching out for your expertise and efforts.

Please let me know if there are any questions regarding our program.

Sincerely,

Dennis Wandrey

Dennis Wandrey, Mayor
Attachment

110 E. Grizzly Dr., De Kalb, TX 75559...Phone 903-667-2410…Fax 903-667-2689

CITY OF DEKALB

WATER CONSERVATION PLAN

AND

EMERGENCY WATER DEMAND MANAGEMENT PLAN

Date:

July, 2018

Prepared By:

MTG Engineers & Surveyors, Inc.
5930 Sumerhill Road
Texarkana, Texas 75503
(903)838-8533

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1 INTRODUCTION

The **City of DeKalb (City)** is charged with ensuring that there is a safe and plentiful supply of water available for residential, economic, and recreational growth for the municipality.

In this capacity, DeKalb has prepared this Water Conservation and Emergency Water Demand Management Plan (Plan).

The City currently has sufficient supplies of water to meet the residential, economic, and recreational need of our area. Despite this supply, there is a pressing need to conserve water in order to lower costs for our citizens and to ensure that there is an abundance of water for economic development. Conservation of our water is an important step in meeting these goals.

1.1 Utility Evaluation Data

Appendix A of this Plan contains a form titled Municipal Water Conservation Planning Data: Utility Survey. This form was prepared by the TWDB. It is recommended that this form be completed annually and used as the basis for the Plan. The date should be used to evaluate existing conditions as well as to evaluate the potential of proposed conservation projects.

1.2 Need for and Goals of the Program

It is recommended that the TWDB estimates be used for municipal planning to ensure that sufficient waster is available for residential and economic use. These projections can be found in Appendix B of this Plan. These estimates show various scenarios of water demand versus population with various levels of conservation efforts. These projections can be achieved through the adoption and implementation of this Plan. The benefits and savings to the City are readily apparent once the conservation measures become a priority.

1.3 Long Term Water Conservation Plan Elements

The following components are included in this plan:

1. Education and information programs for water customers including indoor and outdoor uses by residential, commercial, and industrial customers;
2. Conservation oriented rate structures;
3. Metering, meter repair and replacement program;
4. Leak detection and repair programs;
5. Implementation and enforcement means;
6. Provisions for periodic review of the program by the City or the TWDB.
7. Water conserving landscape ordinances and techniques;
8. System pressure controls;
9. Recycling and reuse projects;
10. Plumbing retrofit programs; and,
11. Plumbing codes or regulations consistent to the new state requirements.

Each of these plan elements are included.

1.4 Emergency Water Demand Management Plan Estimates

This plan details measures to address an emergency situation and how to deal with the emergency. These measures are as follows:

1. Education and information programs;

2. Program implementation procedures;
   (a) Trigger conditions and level of severity trigger conditions signaling the start of an emergency period and the level of severity. These are typically listed as follows:
      (1) mild condition
      (2) moderate condition
      (3) severe condition
      (4) other

   (b) Emergency water demand response measures;
   These describe the types of measures taken in response to a given severity level.
      (1) mild condition response measures
      (2) moderate condition response measures
      (3) severe condition response measures
      (4) other

   (c) Education;

(d) How to initiate actions;

(e) How to terminate actions; and

(f) Means of implementation.

1.5 Legal and Regulatory Components and Program Adoption

In order to successfully implement the conservation Plan, the City has adopted resolutions to require conservation efforts. The resolutions are as follows:

1. Plan adoption resolution,
2. Emergency Water Demand Management Ordinance,
3. Water conservation plumbing code ordinance,
4. Plumbing fixture retrofit ordinance, and
5. Water conservation landscape ordinance.

1.6 Annual Reporting

The water conservation measures should be reviewed annually to judge their effectiveness. Results should be reported to the City Council.

2 WATER CONSERVATION PLAN

2.1 Introduction

The benefits of water conservation include the following:

- Reduce capital needs and operating costs for water and wastewater systems;
- Reduce demand on limited supplies, thereby extending their useful life and function;
- Reduce peak demands on treatment and distribution systems;
- Drought proof water systems;
- Reduce wastewater flows and enhance downstream water quality;
- Prepare for the potential to continue economic activities in light of limited supplies; and,
- Saving all citizens money through reduced utility bills.

2.2 Water Conservation Plan Development Procedures

Following is a brief outline of these measures.

A. Identify Needs and Establish Goals
   1. Conduct a System Water Audit
      a. determine unaccounted-for water volumes and likely causes;
      b. determine limits of existing supply system and identify potential new sources; and,
      c. determine capacity of wastewater collection and treatment system.
   2. Define Problems from Audit
      a. peak, average, or other use problems;
      b. unaccounted-for water;
      c. wastewater system constraints; and,
      d. other problems.
   3. Establish possible goals, such as a percentage reduction in per capita water use, reducing unaccounted water use, reducing wastewater flows, or other goals for the program to achieve.

B. Assess Supply and Demand Management Potentials
   In any utility system, there is a clear distinction between supply management methods (meter repair and replacement, leak detection, pressure regulation, watershed management, and reuse) which the utility has control of, and demand management methods (education, pricing, and regulations) which impact customers' water-use patterns. Since the types of measures used to address supply side methods can be accomplished through internal directives while demand side measures involve the customer directly, different considerations must be used when

assessing the different methods. Each water conservation measure needs to be evaluated to determine its possible contribution.

C. Analyze the Cost-effectiveness and Impacts
Determine the cost and potential savings of each measure considered for inclusion in the management programs selected.

D. Involve the Public in the Planning Process
Once the information on system operations, constraints, and supplies has been gathered, system audits conducted, and the potential impacts and benefits of various conservation measures have been analyzed, input from the public is essential in the actual selection of specific goals and in the program design and implementation. This can take the form of public meetings, hearings, citizen committees, or other public forums. Public involvement serves three critical purposes:

1. It informs the public of the need for conservation and the potential that various measures have in reducing water use;
2. It allows the public to have input concerning final selection of these goals and measures; and,
3. Public involvement will allow the City to determine possible sources of support and cooperation for, as well as opposition to, various program elements.

E. Choose Management Program(s) and Design the Specifics of Each and Specify a Plan of Action for Each Measure Chosen.

F. Evaluate and Select the Needed Equipment, Materials, and Supplies

G. Summarize the Conservation Plan
1. Restate the conservation goal.
2. Summarize the water conservation plan.
3. Solicit public support and involvement.

H. Develop and Adopt Implementing Documents, Ordinances, and Other Enforcement Instruments

2.3 Conservation Methods

The City recognizes that there are many ways to achieve reductions in water usage. Entities should bear in mind that all proposed conservation measures will not endanger area citizens or the safety of the public water supply in any form or fashion.

The principal water conservation methods that should be considered are:

- Education and information,
- Strict adherence to plumbing codes,
- Water conservation plumbing retrofits,
- Water conservation oriented rate structures,
- Universal metering and replacement,
- Water conserving landscaping,
- Leak detection and repair,
- Pressure controls in the distribution system,
- Recycling and reuse,
- Plan implementation and enforcement, and
- Review and evaluation.

2.3.1 Education and Information

Education is the lowest cost and easiest way to promote water conservation. Aggressive education campaigns consisting of advertising programs, exhibits, and programs and the best tools to inform the public of water savings practices. There are many ways to save water both inside and outside of the home. Education campaigns should be tailored to meet current or expected conditions.

2.3.2 Plumbing Codes

The City will monitor building construction to ensure that state and local codes are being followed. The State Plumbing Code mandates the use of water conserving fixtures as follows:

Fixture	**Standard**
Shower Heads	No more than 2.75 gallons per minute at 80 pounds per square inch of pressure (psi).
Lavatory, Sinks, Faucets and Aerators	No more than 2.2 gallons per minute at 60 pounds psi.
Wall-mounted, Flushometer Toilets	No more than 2.0 gallons per flush.
All other toilets	No more than 1.6 gallons per flush.
Urinals	No more than 1.0 gallons per flush.
Drinking Water Fountains	Must be self-closing.

2.3.3 Water Conservation Retrofits
Through the education phase of the plan, citizens with older homes and plumbing fixtures should be encouraged to install water conserving appliances.

Area businesses should also be asked to retrofit these older fixtures.

2.3.4 Water Conservation-Oriented Rate Structures
These rate structures typically encourage the wise use of water. Practices such as daytime irrigation, high summer use and rates where the per unit cost of water decreases as the use increases will be discouraged.

2.3.5 Universal Metering and Replacement
All water users should be metered, and where possible, multi-family units should have a meter per unit. A regularly scheduled maintenance program of meter repair and replacement is required. The following schedule is the suggested minimum:

1. Production (master) meters - test once a year;
2. Meters larger than 1 1/2" - test once a year; and,
3. Meters 1 1/2" or smaller - test every ten years.

2.3.6 Water Conserving Landscapes
During summer months, a large amount of the total water used is placed on lawns and landscaped areas. Selection of drought resistant and native plants is recommended. Through the education program and local landscapers, xeriscape (water conserving landscaping) practices are encouraged. Additional information of this practice can be obtained from the TWDB.

2.3.7 Leak Detection and Repair
Leak detection and repair is an important part of water conservation. Annualized water accounting should be a part of this program. There are many sources of unaccounted for use of water. An effective leak detection system will identify leaks and allow for scheduled repair.

1. For 2017 the loss or unmetered rate was more than 28% of total purchase.
2. For 2020, our target is to reduce this loss to 20% and by 2025 to reduce this loss to 15% of total purchase.

2.3.8 Pressure Controls
The City will strive to maintain pressures between 30 and 75 psi so as not to cause stress on aging pipes and household fixtures.

2.3.9 Recycling and Reuse

All potential avenues for reuse of treated water will be explored. At this time we have limited abilities for reuse and customers for the reused water.

2.3.10 Plan Implementation and Enforcement

Measures that have been implemented are as follows:

1. A resolution by the City or utility adopting the Water Conservation Plan and stating the goals of the Plan.
2. Ordinances or legislation necessary to implement the enforcement measures required to enforce the Plan.
3. Adoption of regulations such as the new state plumbing code tailored to meet community needs.

2.3.11 Review and Evaluation

The Water Conservation Plan will be reviewed periodically in order to ensure the plan is current with ever-changing conditions. The Plan will be amended as required.

2.4 Water Conservation Goals

The following table provides the current water use as well as the five and ten year goals for the loss prevention and use totals.

DeKalb (2017 per capita = 118 GPD	2017 (GPD)	2020 (GPD)	2030 (GPD)
Population	1,656	1,757	1,807
Average Weather	118	110	100
Below Normal Rainfall	138	128	118
Average Conservation	110	100	90
Below Normal Conservation*	124	114	104
Average Advanced Conservation	103	93	83
Below Normal Advanced	118	108	98
With Plumbing Code Only			
Average Conservation	118	108	98
Below Normal Conservation*	130	120	110
Average Advanced Conservation	118	108	98
Below Normal Advanced	125	115	105

*TWDB recommends using the "Below Normal Rainfall with Expected Conservation" for use in developing water forecasts.

2.5 Summary of Water Conservation Plan Development

By addressing the steps listed above, DeKalb will have a successful water conservation plan. These steps were taken from TWDB guidelines and other conservation plans.

3 EMERGENCY WATER DEMAND MANAGEMENT PLAN

3.1 Introduction

Drought or other rapidly developing emergency conditions can disrupt the normal availability of a water supply. For example, even though the City may have an adequate water supply, the supply could become contaminated or a disaster could destroy all or part of the system. Also during drought periods, consumer demand is often significantly higher than normal, and some older systems or systems serving rapidly growing areas may not have the capacity to meet higher-than-average demands without system failure or other unwanted consequences. System treatment, storage, or distribution failures can also present an emergency demand management situation.

An emergency water demand management plan includes those short-term measures that we can use to cause a significant, but temporary, reduction in water use in response to an emergency. These measures usually involve voluntary use reductions, but also may include the restriction or elimination of certain types of water use, water rationing, or the temporary use of water from sources other than the established supplies. Because the onset of emergency conditions is often rapid, it is important that we be prepared. Furthermore, the citizen or customer must know that certain measures not otherwise used in an ongoing long-term water conservation program may be necessary if drought or other emergency conditions occur.

This section contains procedures and guidance for the preparation of emergency water demand management plans. In developing such a plan, it is important to distinguish emergency water demand management planning from water conservation planning. While water conservation involves implementing permanent water-use efficiency or reuse practices, emergency water demand management plans establish temporary methods or techniques designed to be used only as long as an emergency exists.

3.2 Plan Development Procedures

The development of an emergency water demand management plan requires that certain important considerations and procedures be taken into account. The following material outlines these key development procedures:

A. System Constraints
   1. The limiting factors for our water system supply are:
      a) The amount of water we can receive from the Texarkana Water Utility (TWU) system due to physical constraints (pipe sizes, pumping, etc.),
      b) The ability of Riverbend Water Resource District to construct additional facilities and provide more water.

2. The limiting factors for our water system capacity are:
   a) Current TWU contract for water supply does not allow expansion into rural areas,
   b) Pipe sizes and age of piping in older areas and nearer to the city limits.

B. Locate and Assess Alternative Sources
   1. At this time DeKalb cannot access adjacent water systems or supplies for emergency water. With some notice the Central Bowie County Water Supply District could potentially supply emergency water on a very short term basis. No wastewater can be treated or reclaimed at this time.

C. Assess System Management and Rank Severity of Impacts
   1. Emergency conditions can be caused by locally caused conditions such as line breaks, equipment outages and loss of power. These typically represent short term emergencies. The severity can be as follows:
      a) Mild – Conditions can be returned to normal within four hours of inception. No loss of service to the community. No mandated TCEQ restrictions such as boil orders.
      b) Moderate – Conditions can take many hours or days before full service can be returned. In case of mechanical failures there may be geographical losses of water and/or requirements for boil orders. In the event of drought, official notification of conservation and/or rationing could begin.
      c) Severe – Conditions are critical and full emergency measures are required and/or emergency water use only.
   2. Group conditions of cause by impact severity and set trigger conditions.

D. Design Emergency Management Program
   1. Evaluate the measures of information programs, media programs, economic incentives, fines, rationing, prohibition of uses, and legal remedies.
   2. Rank measures by order of severity of conditions determined in C.1 above.

E. Evaluate Procedures and Regulations and Implement Plan
   1. Determine procedures to address in the plan, such as notification, trigger conditions, method to update plan, and guidebooks or checklists for the utility.
   2. Determine the necessary legal and regulatory considerations, such as ordinances, changes in bylaws, revised or alternative contracts with suppliers, and changes in water rights.

3.3 Plan Elements

The City's plan includes the following six elements:

1. Trigger conditions signaling the onset of an emergency, and the basis for setting various levels of severity;
2. Emergency water demand management measures associated with respective trigger conditions;
3. Information and education;
4. Initiation procedures;
5. Termination notification actions; and,
6. Means of implementation.

3.4 Trigger Conditions

Following are the trigger conditions for full implementation of the emergency water plan.

A. Mild Conditions
   1. Water demand has reached or exceeded a specific percentage of the safe capacity of the system (approximately 25%) or 245,000 gallons per day (2017).
   2. The water supply is still adequate, but due to breaks in mains or equipment failures, boil orders or emergency (short term) measures are implemented.

B. Moderate Conditions
   1. Water demand has reached the predetermined limit of the system, beyond which the failure of a pump or some other piece of equipment could cause a serious disruption of service to part or all of the system (an example may be that daily demand has exceeded 90 percent of the capacity of the system for three consecutive days).
   2. Storage levels have reached the second impact level, beyond which operational problems will occur.
   3. Water supply storage levels have declined to the second impact level.

C. Severe Conditions
   1. The imminent or actual failure of a major component of the system has occurred which will cause an immediate health or safety hazard.
   2. Water demand has reached or exceeded the third impact level. An example might be that demand exceeds the system's capacity on a regular basis, thereby presenting the imminent danger of a major system failure.
   3. Lake or treatment levels (from TWU or Riverbend) have declined to the third impact level. An example might be that lake levels (specify a level in feet above mean sea level) are so low that diversion or

pumping equipment will not function properly.
4. Water levels are low enough in the distribution system storage reservoirs to hinder adequate fire protection.

Conditions for the phase out or a downgrade of the condition's severity should also be considered. In addition, unforeseen events such as toxic spills or multiple component failures can occur, requiring the initiation of an emergency demand management response program for which no trigger condition has been established.

3.5 Emergency Water Demand Management Measures

The City or utility will need to establish emergency measures and a plan for their implementation when preselected trigger conditions are reached. The types of measures will depend on local conditions, but in most cases, there should be different types of measures that apply to the various levels of severity (i.e., mild, moderate, or severe) for drought or other emergency conditions. Specific measures could include the following:

1. Imposing restrictions or bans on nonessential uses such as lawn waters, car washing, and pool filling.
2. Communicating methods to reduce the quantity of water needed for drinking, cooking, bathing, and laundry;
3. Implementing rationing plans;
4. Establishing pricing structures that incorporate surcharges and penalties or fines for a noncompliance;
5. Locating, assessing, and securing additional sources, including wells, ponds, emergency basis, building emergency facilities, and temporary reuse of wastewater for non-potable uses; and,
6. Designing means of enforcement.

The measures for each level of severity should include continued implementation of relevant requirements and actions imposed under the preceding level. Examples of some of the measures that could be employed for mild, moderate, and severe conditions are listed below.

A. Mild Condition Measures
   1. Inform the public by mail and through the news media that a trigger condition has been reached, and that water users should look for ways to reduce water use.
   2. Activate an information center and discuss the situation in the news media.
   3. Advise the public of the trigger condition daily.
   4. Advertise a voluntary daily lawn watering schedule.

B. Moderate Condition Measures
   1. Impose a mandatory lawn watering schedule
   2. Assess fines to water wasters.
   3. Institute an excessive use fee, special pricing structure, or surcharge.
   4. Prohibit certain uses such as ornamental water fountains or other nonessential water uses.
   5. Request industries or other non-municipal water users to stop certain uses, find alternative sources, increase recycling, or modify production processes where possible.

C. Severe Condition Measures
   1. Prohibit all outdoor water use.
   2. Limit the amount of water each customer can use, and take legal action as needed to secure compliance.
   3. Require industrial or commercial water users to stop operations so the remaining water is available for essential health and safety-related uses.

3.6 Information and Education

The public should be informed of what will be expected during a drought or emergency situation. Therefore, once an emergency water demand management plan has been adopted, the public should be informed about the content and purpose of the plan before the onset of any emergency condition. The information should describe trigger conditions and emergency measures, and the need to implement the measures in the event of an emergency. Possible methods of educating and informing the public include:

1. Public meetings
2. Radio and television public service announcements and news stories;
3. Newspaper articles; and,
4. Letters, bill inserts or messages, and brochures to water customers.

3.7 Initial Procedures

The City or utility should have written procedures that contain adequate methods of informing customers, other utilities, and government entities as far in advance as possible that a trigger condition is being approached or has been reached, and that a certain phase of the emergency water demand management plan must be implemented. These written procedures may include:

1. Automatic regulatory implementation provisions;
2. Prearranged media notification or press release procedures;
3. Direct notification procedures including mail or, if needed, telephone notification systems;

4. Prearranged contract procedures to obtain emergency water supplies from other sources if needed; and,
5. Checklists or operating procedures as necessary.

3.8 Termination Notification

The City or utility should have a written procedure to inform the customers and other directly affected parties that the emergency has passed. The establishment of termination triggers and the decision to terminate must be based on sound judgement by proper City or utility authorities.

3.9 Implementation

The primary reason for developing a plan is to have a guide for implementing an emergency water demand management program if the need occurs. It should be the intent of the City or utility to develop a workable plan that customers understand and which can be implemented if needed. In order to accomplish this, each City or utility will need to develop and adopt legal and regulatory documents or instruments that are appropriate. In many cases, it is advantageous to adopt an ordinance or regulation providing prior authorization to a designated official to begin immediate implementation of contingency measures when a trigger condition is reached.

Legal and regulatory components that may be necessary for implementation include:

1. Ordinances, bylaws, or other legal documents;
2. Changes in plumbing codes;
3. New or revised contracts with potential water suppliers;
4. Conditions in contracts with industries or commercial water users who may have water supplies cut off or curtailed; and
5. Changes or conditions to water rights permits or contracts with current water suppliers.

3.10 Possible Sources of Information

The Texas Water Development Board and a number of other organizations and agencies have literature and studies that could be useful to those developing emergency water demand management plans. The City can be contacted to help provide a listing of some of these sources.

Certification Page

I certify that this document was prepared under my direction or supervision to assure that the City of DeKalb has a water conservation plan that addresses our needs for a safe and dependable water supply.

Signed: _____ Date: 7-26-18

Dennis Wandrey

Mayor

CENTRAL BOWIE COUNTY

WATER SUPPLY CORPORATION

WATER CONSERVATION PLAN (AMENDED)

May 1, 2015

2822 Hwy 82 W
PO Box 306
New Boston, TX 75570
Phone (903) 628-5601
Fax (903) 628-9258
Email cbcwsc@aol.com

Water Conservation Plan

I. INTRODUCTION

A. Purpose

Regulations promulgated by the Texas Water Development Board (TWDB) require a water conservation plan (WCP) to be submitted when requesting financial assistance. The Central Bowie County Water Supply Corporation (CBCWSC) has received funding from the TWDB for improvements to the water distribution system.

The objective of a WCP is to conserve water supplies and to reduce the quantity of water and wastewater that facilities must handle. This is accomplished by implementing permanent water use efficiency or reuse practices which are specified in the WCP.

B. Goals

The goal of this conservation plan is to achieve a reduction in the per capita consumption of water. When water use is reduced, wastewater flows also experience a reduction. The goal of this conservation plan is to achieve a reduction in per capita water consumption of three percent (3%) over the next 30 years. The average per capita water consumption for the Central Bowie County WSC for 2014 was 65.81 gallons per day. A 3% reduction will lower the average to 63.84 gallons per day.

The Corporation has also established a goal to reduce the per capita water loss. The average water loss per capita per day for years 2012, 2013, and 2014 was 6.67 gallons (10.35%). The Central Bowie County WSC has set a 5 year water loss goal of 6.52 gpcd (10%) and a 10 year water loss goal of 5.8 gpcd (9%).

C. Planning Area

The Central Bowie County WSC provides water service to approximately 2,677 connections in Bowie County. The 321 miles of distribution system piping consists of roughly 2 miles of 1.5”, 71 miles of 2”, 12 miles of 2.5”, 93 miles of 3”, 45 miles of 4”, 63 miles of 6”, 32 miles of 8”, and 3 miles of 12”. The existing system consists of three service areas as outlined below:

Rock Creek – The Rock Creek service area is located east of HWY 98, and provides service to 409 connections in the southeastern portion of the system, as shown in Map 2. Texarkana Water Utilities is under contract to provide 160 gpm of water supply to the Rock Creek Pump Station. Supply from Texarkana is collected in a 100,000 gallon ground storage tank. Two

450 gpm high service pumps convey the water into the distribution system and a 100,000 gallon elevated storage tank located near Old Boston. The hydraulic grade of the plant is 475 ft mean sea level (msl) and the ground surface elevation is 295 ft msl.

HWY 98 – The HWY 98 service area is located along highway 98, and provides service to 1,268 connections in the central portion of the system, as shown in Map 1 & 2. Texarkana Water Utilities is under contract to provide 485 gpm of water supply to the HWY 98 Pump Station. The HWY 98 service area consists of three pressure planes. Water supply from Texarkana is collected in two 84,000 gallon ground storage tanks at the HWY 98 Pump Station. The HWY 98 Pump Station distributes the water with two 400 gpm high service pumps and two 1000 gpm pumps to the 30,000 gallon elevated tank at Malta and the 100,000 gallon elevated tank along FM 3378 in the northern pressure plane. Water flows from the northern pressure plane to the southern pressure plane and fills a 62,000 gallon ground storage tank at the Simms Pump Station. The Simms Pump Station consists of two 200 gpm high service pumps, two 500 gpm pumps, and a 30,000 gallon elevated tank. Water flows from the northern pressure plane to the western pressure plane and fills a 180,000 gallon standpipe along FM 990.

DeKalb – The DeKalb service area is located in the vicinity of HWY 259, and provides service to 1000 connections in the western portion of the system, as shown in Map 1. It is divided into two pressure planes. Texarkana water utilities are under contract to provide 285 gpm of water supply to the DeKalb Pump Station along HWY 82. Water supply from Texarkana is collected in one 100,000 gallon ground storage tank. Water is then pumped into a 100,000 gallon elevated storage via three 350 gpm high service pumps and two 600 gpm pumps. Water is then conveyed into the eastern pressure plane distribution system and a 210,000 gallon standpipe along HWY 259 which provides elevated storage for the western pressure plane.

II. WATER CONSERVATION PLAN

A. Introduction

There are several elements which need to be taken into consideration when developing a WCP. The following elements are included in this WCP:

(1) Measures to Determine and Control Unaccounted for Water

(2) Meter Testing and Repair

(3) Distribution System Leak Detection and Repair

(4) Water Rate Structure

(5) Program of Education and Information

(6) New Customer Services

(7) Implementation and Enforcement

(8) Annual Reporting

(9) Documentation

B. Goal

The goal of a water conservation plan is to reduce the per capita consumption of water. While some systems have achieved a 25 percent reduction, the normal range is from 5 to 15 percent. When water use is reduced, wastewater flows also experience a reduction.

The average per capita water consumption for the Central Bowie County WSC for 2014 was 65.81 gallons per day. This value is lower than that of a typical water system. The 5 year goal of the Central Bowie County WSC is to reduce the per capita water usage by 1% to 65.15 gallons per capita per day (gpcd). The WSC has also set a 10 year goal to reduce the per capita usage by 2% to 64.49 gpcd. With the implementation of this water conservation plan, the WSC expects to see a reduction in water usage of 3% to 63.84 gpcd in the next 30 years. The average per capita water loss for the Central Bowie County WSC for years 2012, 2013, and 2014 was 6.67 gallons per day (10.35%). The Central Bowie County WSC has set a 5 year water loss goal of 6.52 gpcd (10%) and a 10 year water loss goal of 5.8 gpcd (9%).

The progress made by this plan can be calculated by dividing the total amount of water purchased/produced in a month by the number of days in the month, number of active connections, and the number of people per connection. The result is the water used in terms of gallons per capita per day. Water loss per capita can be calculated in a similar manner.

C. Plan of Action

1. Measures to Determine and Control Unaccounted for Water

Water meters are installed at all connections to the water system to record usage. Operators estimate the water used for flushing waterlines and lost through leaks. The Central Bowie County WSC will conduct water audits annually and utilize the data to ensure that all the water in the system is

accounted for. The information from these audits will be documented and kept in the Utility Department files. Real water losses are identified and corrected; if any discrepancies are found between the amount of water entering the system and exiting the system, an investigation will be undertaken to account for the water. Real water losses are minimized by replacement of deteriorating water mains and appurtenances. When a source of unaccounted-for water loss is located, corrective repairs or other actions will be taken as soon as feasible.

2. Meter Testing and Repair

The Central Bowie County WSC has a water accounting program that is implemented by staff observance of meter readings and billings. Comparisons will be made and if water consumption, or monthly billing, changes dramatically, the meter becomes suspect and is tested and repaired or replaced as necessary. In addition to testing and replacement as is deemed necessary by water accounting comparisons, meters will be monitored for accuracy annually and replaced on a fifteen-year cycle. Logs will be kept to assure the accuracy of the testing and meter replacement cycle. An analysis performed just prior to creation of this plan revealed the following number of meters and respective ages:

> 25 yrs old	308
20-25 yrs old	418
15-20 yrs old	310
10-15 yrs old	724
5-10 yrs old	526
< 5 yrs old	400

3. Distribution System Leak Detection and Repair

Significant quantities of water can be conserved through meter repair, meter replacement, water audits, and leak detection and repair programs. The Central Bowie County WSC will continue their ongoing leak detection and repair programs to reduce real water losses. Pressure zones are operated based on the topography. Waterline leaks are detected by utility personnel while reading meters, maintaining the water system, and performing routine surveillance programs. Additionally, water audits shall be utilized to determine if leaks exist which have gone undetected.

The Central Bowie County WSC maintains a record management program for recording water deliveries, sales, and losses. Comparisons will be routinely made several times each month to minimize water losses and assure efficient operation of the water system. Prompt remedial action is taken if the record management program indicates water loss.

4. Water Rate Structure

The Central Bowie County WSC has set rates that do not promote excessive use of water. The Water Supply Corporation has an inclining water rate structure that discourages water waste and excessive use of water by its customers as shown in the Central Bowie County Water Supply Corporation Tariff Section 4: Rates and Service Fees. The minimum residential water charge is $25.00 for 2,000 gallons or less with a $5.00 charge per thousand for 2,001-20,000 gallons, and $6.00 per thousand for usage over 20,000 gallons. The Central Bowie County WSC will continue to review rates annually to insure water revenues exceed expenses and replacement costs and to discourage excessive and wasteful use.

5. Program of Education and Information

The Central Bowie County WSC will provide literature on conservation to its customers in the following manner:

i. Initial Year Program

(a) The public education program during the initial year shall include all the activities outlined in the Long-Term Program plus:

(b) Distribution of a fact sheet explaining the Water Conservation Plan shall be made available upon adoption of the Plan.

(c) Publication of newspaper articles in a local paper in conjunction with the semiannual distribution of educational materials.

ii. Long-Term Program

Distribution of educational materials available from the Texas Commission on Environmental Quality, American Water Works Association, Texas Water Development Board, and others will be made semiannually and timed to correspond with peak summer demand periods. One of these semiannual notifications may be made by publication in the newspaper. Staff shall keep a record of the number of notifications distributed semi-annually.

iii. Annual Educational Water Conservation Activity

In addition to the above Educational and Information program, Central Bowie County WSC will be available to present water conservation programs to local schools, civic organizations, and other groups.

6. New Customer Services

New retail customers will be provided with water conservation literature, including specific methods and ways to save water, when applying for service.

7. Implementation and Enforcement

The Board of Directors for the Central Bowie County WSC passed a resolution officially adopting this water conservation plan. A copy of the resolution is included as Appendix A.

All authority as to the implementation and enforcement of this plan is given to the Central Bowie County WSC Board of Directors.

8. Annual Reporting

Annually for 3 years after the loan is approved, the administrator will submit a report to the Executive Administrator of the Texas Water Development Board within 60 days of the anniversary date of the loan closing. This report will include the following elements:

i. Progress made in the implementation of the program
ii. Response to the program by the public
iii. Quantitative effectiveness of the program

9. Documentation

A copy of the plan was forwarded to the Regional Water Planning Group D at the following address:

Northeast Texas Regional Water Planning Group D
Linda Price
NETMWD
P.O. Box 360
Linden, TX 75563

A copy of the transmittal letter is included as Appendix B.

III. EMERGENCY WATER DEMAND MANAGEMENT PLAN

The Central Bowie County WSC adopted a Drought Contingency Plan on August 1, 2000. This Plan describes the Emergency Water Demand Management Plan for the Central Bowie County WSC. A copy of the plan is included with this Water Conservation Plan as Appendix C.

APPENDIX A

RESOLUTION TO ADOPT THE WATER CONSERVATION PLAN

RESOLUTION 050515

A RESOLUTION by the Board of Directors of the Central Bowie County Water Supply Corporation adopting the 2015 CBCWSC Water Conservation Plan.

WHEREAS, regulations promulgated by the Texas Water Development Board (TWDB) require that a Water Conservation plan (WCP) to be submitted by entities receiving financial assistance;

WHEREAS, CBCWSC adopted a WCP in 2007 and revised it in 2010; and

WHEREAS, WCPs must be reviewed and updated every 5 years;

NOW, THEREFORE, BE IT RESOLVED:

That the 2015 CBCWSC Water Conservation Plan is hereby adopted and authorized to be filed with the Northeast Texas Regional Water Planning Group D and Texas Water Development Board.

This resolution shall take effect and be in force from and after the 6th day of July, 2010, being the date of its enactment.

The vote was: Yeas 7 Nays 0 Abstained 0

Central Bowie County Water Supply Corporation

(SEAL)

Harrell Hignight
President

Attest:

Thomas Coleman, II
Secretary-Treasurer

APPENDIX B

TRANSMITTAL LETTER TO
THE
NORTHEAST TEXAS REGIONAL WATER PLANNING GROUP D

Central Bowie County WSC

P.O. Box 306
New Boston, TX 75570
Phone (903) 628-5601 Fax (903) 628-9258
Cbcwsc@aol.com

Date: May 1, 2015

Linda Price
Northeast Texas regional Water Planning Group Region D
P. O. Box 360
Linden, Texas 75563
linda.price@wardtimber.com

RE: Central Bowie County Water Supply Corporation (CBCWSC) Water Conservation Plan.

Dear Mrs. Price:

Transmitted herewith is one (1) copy of the revised CBCWSC Water Conservation Plan. The CBCWSC Board of Directors adopted the revised plan with resolution 050515 on May 5, 2015.

If you have any questions, or need additional information, please let me know.

Thank you for your assistance.

Sincerely,

Hal W Harris

Hal Harris
General Manager

APPENDIX C

DROUGHT CONTINGENCY PLAN

Drought Contingency Plan

for

Central Bowie County Water Supply Corporation (CBCWSC)

PO Box 306
2822 Hwy 82 West
New Boston, Texas 75570

Adopted: 8/1/2000

Effective: 8/1/2000

Section I: Declaration of Policy, Purpose, and Intent

In order to conserve the available water supply and protect the integrity of water supply facilities, with particular regard for domestic water use, sanitation, 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 Central Bowie County Water Supply Corporation (CBCWSC) hereby adopts the following regulations and restrictions on the delivery and consumption of water. Water uses regulated or prohibited under this Drought Contingency Plan (the Plan) are considered to be non-essential and continuation of such uses during times of water shortage or other emergency water supply condition are deemed to constitute a waste of water which subjects the offender(s) to penalties as defined in Section XI of this Plan.

Section II: Public Involvement

Opportunity for the public to provide input into the preparation of the Plan was provided by CBCWSC by means of newspapers.

Section III: Public Education

CBCWSC will periodically provide the public with information about the Plan, including information about the conditions under which each stage of the Plan is to be initiated or terminated and the drought response measures to be implemented in each stage. This information will be provided by means of press releases.

Section IV: Coordination with Regional Water Planning Groups

The service area of CBCWSC is located within the Northeast Texas Region (D) and CBCWSC has provided a copy of this Plan to the Northeast Texas Municipal Water District.

Section V: Authorization

The general manager, or his/her designee is hereby authorized and directed to implement the applicable provisions of this Plan upon determination that such implementation is necessary to protect public health, safety, and welfare. The general manager, or his/her designee, shall have the authority to initiate or terminate drought or other water supply emergency response measures as described in this Plan.

Section VI: Application

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

Section VII: Definitions

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

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

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

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

Customer: any person, company, or organization using water supplied by CBCWSC.

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

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

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

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

Non-essential water use: water uses that are not essential, nor required, for the protection of public, health, safety, and welfare, including:

(a) irrigation of landscape areas, including parks, athletic fields, and golf courses, except otherwise provided under this Plan;
(b) use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle;
(c) use of water to wash down any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas;
(d) use of water to wash down buildings or structures for purposes other than immediate fire protection;
(e) flushing gutters or permitting water to run or accumulate in any gutter or street;
(f) use of water to fill, refill, or add to any indoor or outdoor swimming pools or

Jacuzzi-type pools;
(g) use of water in a fountain or pond for aesthetic or scenic purposes except where necessary to support aquatic life;
(h) failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s); and
(i) use of water from hydrants for construction purposes or any other purposes other than fire fighting.

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

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

The general manager or his/her designee shall monitor water supply and/or demand conditions on a daily basis and shall determine when conditions warrant initiation or termination of each stage of the Plan, that is, when the specified "triggers" are reached.

Stage 1 Triggers -- MILD Water Shortage Conditions

Requirements for initiation

Customers shall be requested to voluntarily conserve water and adhere to the prescribed restrictions on certain water uses, defined in Section VII— Definitions, when, pursuant to requirements specified in the CBCWSC wholesale water purchase contract with Texarkana Water Utilities, notification is received requesting initiation of Stage 1 of the Drought Contingency Plan.

Requirements for termination

Stage 1 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of 3 consecutive days.

Stage 2 Triggers -- MODERATE Water Shortage Conditions

Requirements for initiation

Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses provided in Section IX of this Plan when, pursuant to requirements specified in the CBCWSC wholesale water purchase contract with Texarkana Water Utilities, notification is received requesting initiation of Stage 2 of the Drought Contingency Plan.

Requirements for termination

Stage 2 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of 3 consecutive days. Upon termination of Stage 2, Stage 1 becomes operative.

Stage 3 Triggers -- SEVERE Water Shortage Conditions

Requirements for initiation
Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses for Stage 3 of this Plan when, pursuant to requirements specified in the CBCWSC wholesale water purchase contract with Texarkana Water Utilities, notification is received requesting initiation of Stage 3 of the Drought Contingency Plan.

Requirements for termination

Stage 3 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of 3 consecutive days. Upon termination of Stage 3, Stage 2 becomes operative.

Stage 4 Triggers — CRITICAL Water Shortage Conditions

Requirements for initiation
Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses for Stage 4 of this Plan when, pursuant to requirements specified in the CBCWSC wholesale water purchase contract with Texarkana Water Utilities, notification is received requesting initiation of Stage 4 of the Drought Contingency Plan.

Requirements for termination
Stage 4 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of 3 consecutive days. Upon termination of Stage 4, Stage 3 becomes operative.

Stage 5 Triggers — EMERGENCY Water Shortage Conditions

Requirements for initiation
Customers shall be required to comply with the requirements and restrictions for Stage 5 of this Plan when general manager, or his/her designee, determines that a water supply emergency exists based on:

1. Major water line breaks, or pump or system failures occur, which cause unprecedented loss of capability to provide water service; and
2. Natural or man-made contamination of the water supply source(s).

Requirements for termination
Stage 5 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of 3 consecutive days.

Stage 6 Triggers — WATER ALLOCATION

Requirements for initiation
Customers shall be required to comply with the water allocation plan prescribed in Section IX of this Plan and comply with the requirements and restrictions for Stage 6 of this Plan when, pursuant to requirements specified in the CBCWSC wholesale water purchase contract with Texarkana Water Utilities, notification is received requesting initiation of Stage 6 of the Drought Contingency Plan.

Requirements for termination
Water allocation may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of 3 consecutive days.

Section IX: Drought Response Stages

The general manager, or his/her designee, shall monitor water supply and/or demand conditions on a daily basis and, in accordance with the triggering criteria set forth in Section VIII of this Plan, shall determine that a mild, moderate, severe, critical, emergency or water shortage condition exists and shall implement the following notification procedures:

Notification

Notification of the Public:

The general manager or his/ here designee shall notify the public by means of:

Publication in a newspaper of general circulation,
direct mail to each customer,
signs posted in public places.

Additional Notification:

The general manager or his/her designee shall notify directly, or cause to be notified directly, the following individuals and entities:

CBCWSC Board of Directors
Mayors (New Boston, Dekalb)
Fire Chiefs (NBVFD, DVFD, SVFD)
County Emergency Management Coordinator
County Judge

Stage 1 Response -- MILD Water Shortage Conditions

Goal:

Achieve a voluntary 10 percent reduction in total water use.

Supply Management Measures:

Reduced or discontinued flushing of water mains.

Voluntary Water Use Restrictions:

(a) Water customers are requested to voluntarily limit the irrigation of landscaped areas to Sundays and Thursdays for customers with a street address ending in an even number (0, 2, 4, 6 or 8), and Saturdays and Wednesdays for water customers with a street address ending in an odd number (1, 3, 5, 7 or 9), and to irrigate landscapes only between the hours of midnight and 10:00 a.m. and 8:00 p.m. to midnight on designated watering days.
(b) All operations of CBCWSC shall adhere to water use restrictions prescribed for Stage 2 of the Plan.
(c) Water customers are requested to practice water conservation and to minimize or discontinue water use for non-essential purposes.

Stage 2 Response -- MODERATE Water Shortage Conditions

Goal:

Achieve a 20 percent reduction in total water use.

Supply Management Measures:

Reduced or discontinued flushing of water mains.

Water Use Restrictions.

Under threat of penalty for violation, the following water use restrictions shall apply to all persons:

(a) Irrigation of landscaped areas with hose-end sprinklers or automatic irrigation systems shall be limited to Sundays and Thursdays for customers with a street address ending in an even number (0, 2, 4, 6 or 8), and Saturdays and Wednesdays for water customers with a street address ending in an odd number (1, 3, 5, 7 or 9), and irrigation of landscaped areas is further limited to the hours of 12:00 midnight until 10:00 a.m. and between 8:00 p.m. and 12:00 midnight on designated watering days. However, irrigation of landscaped areas is permitted at anytime if it is by means of a hand-held hose, a faucet filled bucket or watering can of five (5) gallons or less, or drip irrigation system.

(b) Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle is prohibited except on designated watering days between the hours of 12:00 midnight and 10:00 a.m. and between 8:00 p.m. and 12:00 midnight. Such washing, when allowed, shall be done with a hand-held bucket or a hand-held hose equipped with a positive shutoff nozzle for quick rises. Vehicle washing may be done at any time on the immediate premises of a commercial car wash or commercial service station. Further, such washing may be exempted from these regulations if the health, safety, and welfare of the public are contingent upon frequent vehicle cleansing, such as garbage trucks and vehicles used to transport food and perishables.
(c) Use of water to fill, refill, or add to any indoor or outdoor swimming pools, wading pools, or Jacuzzi-type pools is prohibited except on designated watering days between the hours of 12:00 midnight and 10:00 a.m. and between 8 p.m. and 12:00 midnight.
(d) Operation of any ornamental fountain or pond for aesthetic or scenic purposes is prohibited except where necessary to support aquatic life or where such fountains or ponds are equipped with a re-circulation system.
(e) Use of water from hydrants shall be limited to fire fighting, related activities, or other activities necessary to maintain public health, safety, and welfare, except that use of water from designated fire hydrants for construction purposes may be allowed under special permit from CBCWSC
(f) Use of water for the irrigation of golf course greens, tees, and fairways is prohibited except on designated watering days between the hours 12:00 midnight and 10:00 a.m. and between 8 p.m. and 12:00 midnight. However, if the golf course utilizes a water source other than that provided by CBCWSC, the facility shall not be subject to these regulations.
(g) All restaurants are prohibited from serving water to patrons except upon request of the patron.
(h) The following uses of water are defined as non-essential and are prohibited:

1. wash down of any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas;
2. use of water to wash down buildings or structures for purposes other than immediate fire protection;
3. use of water for dust control;
4. flushing gutters or permitting water to run or accumulate in any gutter or street; and
5. failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s).

Stage 3 Response -- SEVERE Water Shortage Conditions

Goal: Achieve a 35 percent reduction in total water use.

Supply Management Measures:

Reduced or discontinued flushing of water mains.

Water Use Restrictions:

All requirements of Stage 2 shall remain in effect during Stage 3 except:

(a) irrigation of landscaped areas shall be limited to designated watering days between the hours of 12:00 midnight and 10:00 a.m. and between 8 p.m. and 12:00 midnight and shall be by means of hand-held hoses, hand-held buckets, drip irrigation, or permanently installed automatic sprinkler system only. The use of hose-end sprinklers is prohibited at all times.
(b) The watering of golf course tees is prohibited unless the golf course utilizes a water source other than that provided by the CBCWSC
(c) The use of water for construction purposes from designated fire hydrants under special permit is to be discontinued.

Stage 4 Response — CRITICAL Water Shortage Conditions

Goal: Achieve a 50 percent reduction in total water use.

Supply Management Measures:

Reduced or discontinued flushing of water mains

Water Use Restrictions: All requirements of Stage 2 and 3 shall remain in effect during Stage 4 except:

(a) Irrigation of landscaped areas shall be limited to designated watering days between the hours of 6:00 a.m. and 10:00 a.m. and between 8:00 p.m. and 12:00 midnight and shall be by means of hand-held hoses, hand-held buckets, or drip irrigation only. The use of hose-end sprinklers or permanently installed automatic sprinkler systems are prohibited at all times.
(b) Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle not occurring on the premises of a commercial carwash and commercial service stations and not in the immediate interest of public health, safety, and welfare is prohibited. Further, such vehicle washing at commercial car washes and commercial service stations shall occur only between the hours of 6:00 a.m. and 10:00 a.m. and between 6:00 p.m. and 10p.m.
(c) The filling, refilling, or adding of water to swimming pools, wading pools, and Jacuzzi type pools is prohibited.
(d) Operation of any ornamental fountain or pond for aesthetic or scenic purposes is prohibited except where necessary to support aquatic life or where such fountains or ponds are equipped with a re-circulation system.
(e) No application for new, additional, expanded, or increased-in-size water service connections, meters, service lines, pipeline extensions, mains, or water

service facilities of any kind shall be approved, and time limits for approval of such applications are hereby suspended for such time as this drought response stage or a higher-numbered stage shall be in effect.

Stage 5 Response -- EMERGENCY Water Shortage Conditions

Goal: Achieve a 60 percent reduction in total water use.

Supply Management Measures:

Reduced or discontinued flushing of water mains

Water Use Restrictions: All requirements of Stage 2, 3, and 4 shall remain in effect during Stage 5 except:

(a) Irrigation of landscaped areas is absolutely prohibited.
(b) Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle is absolutely prohibited.

Stage 6 Response -- WATER ALLOCATION

In the event that water shortage conditions threaten public health, safety, and welfare, the general manager is hereby authorized to allocate water according to the following water allocation plan:

Single-Family Residential Customers

The allocation to residential water customers residing in a single-family dwelling shall be as follows:

Persons per Household	Gallons per Month
1 or 2	6,000
3 or 4	7,000
5 or 6	8,000
7 or 8	9,000
9 or l0	10,000
11 or more	12,000

"Household" means the residential premises served by the customer's meter. "Persons per household" includes only those persons currently physically residing at the premises and expected to reside there for the entire billing period. It shall be assumed that a particular customer's household is comprised of two (2) persons unless the customer notifies the CBCWSC of a greater number of persons per household on a form prescribed by the general manager. The general manager shall give his/her best effort to see that such forms are mailed, otherwise provided, or made available to every residential

customer. If, however, a customer does not receive such a form, it shall be the customer's responsibility to go to the CBCWSC offices to complete and sign the form claiming more than two (2) persons per household. New customers may claim more persons per household at the time of applying for water service on the form prescribed by the general manager. When the number of persons per household increases so as to place the customer in a different allocation category, the customer may notify CBCWSC on such form and the change will be implemented in the next practicable billing period. If the number of persons in a household is reduced, the customer shall notify CBCWSC in writing within two (2) days. In prescribing the method for claiming more than two (2) persons per household, the general manager shall adopt methods to insure the accuracy of the claim. Any person who knowingly, recklessly, or with criminal negligence falsely reports the number of persons in a household or fails to timely notify CBCWSC of a reduction in the number of person in a household shall be fined not less than $100.00.

Residential water customers shall pay the following surcharges:

$4.00 for the first 1,000 gallons over allocation.
$6.00 for the second 1,000 gallons over allocation.
$8.00 for the third 1,000 gallons over allocation.
$1 0.O0for each additional 1,000 gallons over allocation.

Surcharges shall be cumulative.

Master-Metered Multi-Family Residential Customers

The allocation to a customer billed from a master meter which jointly measures water to multiple permanent residential dwelling units (e.g., apartments, mobile homes) shall be allocated 6,000 gallons per month for each dwelling unit. It shall be assumed that such a customer's meter serves two dwelling units unless the customer notifies CBCWSC of a greater number on a form prescribed by the general manager). The general manager shall give his/her best effort to see that such forms are mailed, otherwise provided, or made available to every such customer. If, however, a customer does not receive such a form, it shall be the customer's responsibility to go to the CBCWSC offices to complete and sign the form claiming more than two (2) dwellings. A dwelling unit may be claimed under this provision whether it is occupied or not. New customers may claim more dwelling units at the time of applying for water service on the form prescribed by the general manager. If the number of dwelling units served by a master meter is reduced, the customer shall notify CBCWSC in writing within two (2) days. In prescribing the method for claiming more than two (2) dwelling units, the general manager shall adopt methods to insure the accuracy of the claim. Any person who knowingly, recklessly, or with criminal negligence falsely reports the number of dwelling units served by a master meter or fails to timely notify CBCWSC of a reduction in the number of person in a household shall be fined not less than $200.00. Customers billed from a master meter under this provision shall pay the following monthly surcharges:

$4.00 for 1,000 gallons over allocation up through 1,000 gallons for

each dwelling unit.
$6.00, thereafter, for each additional 1,000 gallons over allocation up through a second 1,000 gallons for each dwelling unit.
$8.00, thereafter, for each additional 1,000 gallons over allocation up through a third 1,000 gallons for each dwelling unit.
$10.00 thereafter for each additional 1,000 gallons over allocation.

Surcharges shall be cumulative.

Commercial Customers

A monthly water allocation shall be established by the general manager, or his/her designee, for each nonresidential commercial customer other than an industrial customer who uses water for processing purposes. The non-residential customer's allocation shall be approximately 75% percent of the customer's usage for corresponding month's billing period for the previous 12 months. If the customer's billing history is shorter than 12 months, the monthly average for the period for which there is a record shall be used for any monthly period for which no history exists. Provided, however, a customer, 75 percent of whose monthly usage is less than 10,000 gallons, shall be allocated 8,000 gallons. The general manager shall give his/her best effort to see that notice of each non-residential customer's allocation is mailed to such customer. It however, a customer does not receive such notice; it shall be the customer's responsibility to contact CBCWSC to determine the allocation. Upon request of the customer or at the initiative of the general manager, the allocation may be reduced or increased if;

(1) the designated period does not accurately reflect the customer's normal water usage, or;
(2) one nonresidential customer agrees to transfer part of its allocation to another nonresidential customer, or
(3) other objective evidence demonstrates that the designated allocation is inaccurate under present conditions.

A customer may appeal an allocation established hereunder to the general manager.

Nonresidential commercial customers shall pay the following surcharges:

Customers whose allocation is 8,000 gallons through 10,000 gallons per month:

$4.00 per thousand gallons for the first 1,000 gallons over allocation.
$6.00 per thousand gallons for the second 1,000 gallons over allocation.
$8.00 per thousand gallons for the third 1,000 gallons over allocation.
$10.Ooper thousand gallons for each additional 1,000 gallons over allocation.

Customers whose allocation is 10,000 gallons per month or more:

1 times the block rate for each 1,000 gallons in excess of the allocation up through 5 percent above allocation.

2 times the block rate for each 1,000 gallons from 5 percent through 10 percent above allocation.
3 times the block rate for each 1,000 gallons from 10 percent through 15 percent above allocation.
4 times the block rate for each 1,000 gallons more than 15 percent above allocation.

The surcharges shall be cumulative.

As used herein, “block rate” means the charge to the customer per 1,000 gallons at the regular water rate schedule at the level of the customer’s allocation.

Industrial Customers

A monthly water allocation shall be established by the general manager, or his/her designee, for each industrial customer, which uses water for processing purposes. The industrial customer’s allocation shall be approximately 90 percent of the customer’s water usage baseline. Ninety (90) days after the initial imposition of the allocation for industrial customers, the industrial customer’s allocation shall be further reduced to 85 percent of the customer’s water usage baseline. The industrial customer’s water use baseline will be computed on the average water use for the 12 month period ending prior to the date of implementation of Stage 2 of the Plan. If the industrial water customer’s billing history is shorter than 12 months, the monthly average for the period for which there is a record shall be used for any monthly period for which no billing history exists. The general manager shall give his/her best effort to see that notice of each industrial customer’s allocation is mailed to such customer. If, however, a customer does not receive such notice, it shall be the customer’s responsibility to contact CBCWSC to determine the allocation, and the allocation shall be fully effective notwithstanding the lack of receipt of written notice. Upon request of the customer or at the initiative of the general manager, the allocation may be reduced or increased if:

(1) the designated period does not accurately reflect the customer’s normal water use because the customer had shutdown a major processing unit for repair or overhaul during the period, or;
(2) the customer has added or is in the process of adding significant additional processing capacity, or;
(3) the customer has shutdown or significantly reduced the production of a major processing unit, or;
(4) the customer has previously implemented significant permanent water conservation measures such that the ability to further reduce water use is limited, or;
(5) the customer agrees to transfer part of its allocation to another industrial customer, or; (6) if other objective evidence demonstrates that the designated allocation is inaccurate under present conditions.

A customer may appeal an allocation established hereunder to the general manager.

Industrial customers shall pay the following surcharges:

Customers whose allocation is 6,000 gallons through 7,000 gallons per month:

$4.00 per thousand gallons for the first 1,000 gallons over allocation.
$6.00 per thousand gallons for the second 1,000 gallons over allocation.
$8.00 per thousand gallons for the third 1,000 gallons over allocation.
$10.00 per thousand gallons for each additional 1,000 gallons over allocation.

Customers whose allocation is 7,000 gallons per month or more:

1 times the block rate for each 1,000 gallons in excess of the allocation up through 5 percent above allocation.
2 times the block rate for each 1,000 gallons from 5 percent through 10 percent above allocation.
3 times the block rate for each 1,000 gallons from 10 percent through 15 percent above allocation.
4 times the block rate for each 1,000 gallons more than 15 percent above allocation.

The surcharges shall be cumulative.

As used herein, “block rate” means the charge to the customer per 1,000 gallons at the regular water rate schedule at the level of the customer’s allocation.

Section X: Enforcement

(a) No person shall knowingly or intentionally allow the use of water from CBCWSC for residential, commercial, industrial, agricultural, governmental, or any other purpose in a manner contrary to any provision of this Plan, or in an amount in excess of that permitted by the drought response stage in effect at the time pursuant to action taken by general manager, or his/her designee, in accordance with provisions of this Plan.
(b) Any person who violates this Plan is guilty of a misdemeanor and, upon conviction shall be punished by a fine of not less than 100.00 dollars and not more than 250.00 dollars. Each day that one or more of the provisions in this Plan is violated shall constitute a separate offense. If a person is convicted of three or more distinct violations of this Plan, the general manager shall, upon due notice to the customer, be authorized to discontinue water service to the premises where such violations occur. Services discontinued under such circumstances shall be restored only upon payment of a re-connection charge, hereby established at $225.00, and any other costs incurred by CBCWSC in discontinuing service. In addition, suitable assurance must be given to the general manager that the same action shall not be repeated while the Plan is in effect. Compliance with this plan may also be sought through injunctive relief in the district court.

(c) Any person, including a person classified as a water customer of CBCWSC, in apparent control of the property where a violation occurs or originates shall be presumed to be the violator, and proof that the violation occurred on the person's property shall constitute a rebuttable presumption that the person in apparent control of the property committed the violation, but any such person shall have the right to show that he/she did not commit the violation. Parents shall be presumed to be responsible for violations of their minor children and proof that a violation, committed by a child, occurred on property within the parents' control shall constitute a rebuttable presumption that the parent committed the violation, but any such parent may be excused if he/she proves that he/she had previously directed the child not to use the water as it was used in violation of this Plan and that the parent could not have reasonably known of the violation.
(d) Any employee of CBCWSC, police officer, or other county employee designated by the general manager, may issue a citation to a person he/she reasonably believes to be in violation of this Ordinance. The citation shall be prepared in duplicate and shall contain the name and address of the alleged violator, if known, the offense charged, and shall direct him/her to appear in the Justice of the Peace on the date shown on the citation for which the date shall not be less than 3 days nor more than 5 days from the date the citation was issued. The alleged violator shall be served a copy of the citation. Service of the citation shall be complete upon delivery of the citation to the alleged violator, to an agent or employee of a violator, or to a person over 14 years of age who is a member of the violator's immediate family or is a resident of the violator's residence. The alleged violator shall appear in Justice of the Peace to enter a plea of guilty or not guilty for the violation of this Plan. If the alleged violator fails to appear in Justice of the Peace, a warrant for his/her arrest may be issued. A summons to appear may be issued in lieu of an arrest warrant. These cases shall be expedited and given preferential setting in Justice of the Peace court before all other cases.

Section XI: Variances

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

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

Persons requesting an exemption from the provisions of this Ordinance shall file a petition for variance with the CBCWSC within 5 days after the Plan or a particular

drought response stage has been invoked. All petitions for variances shall be reviewed by the general manager, or his/her designee, and shall include the following:

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

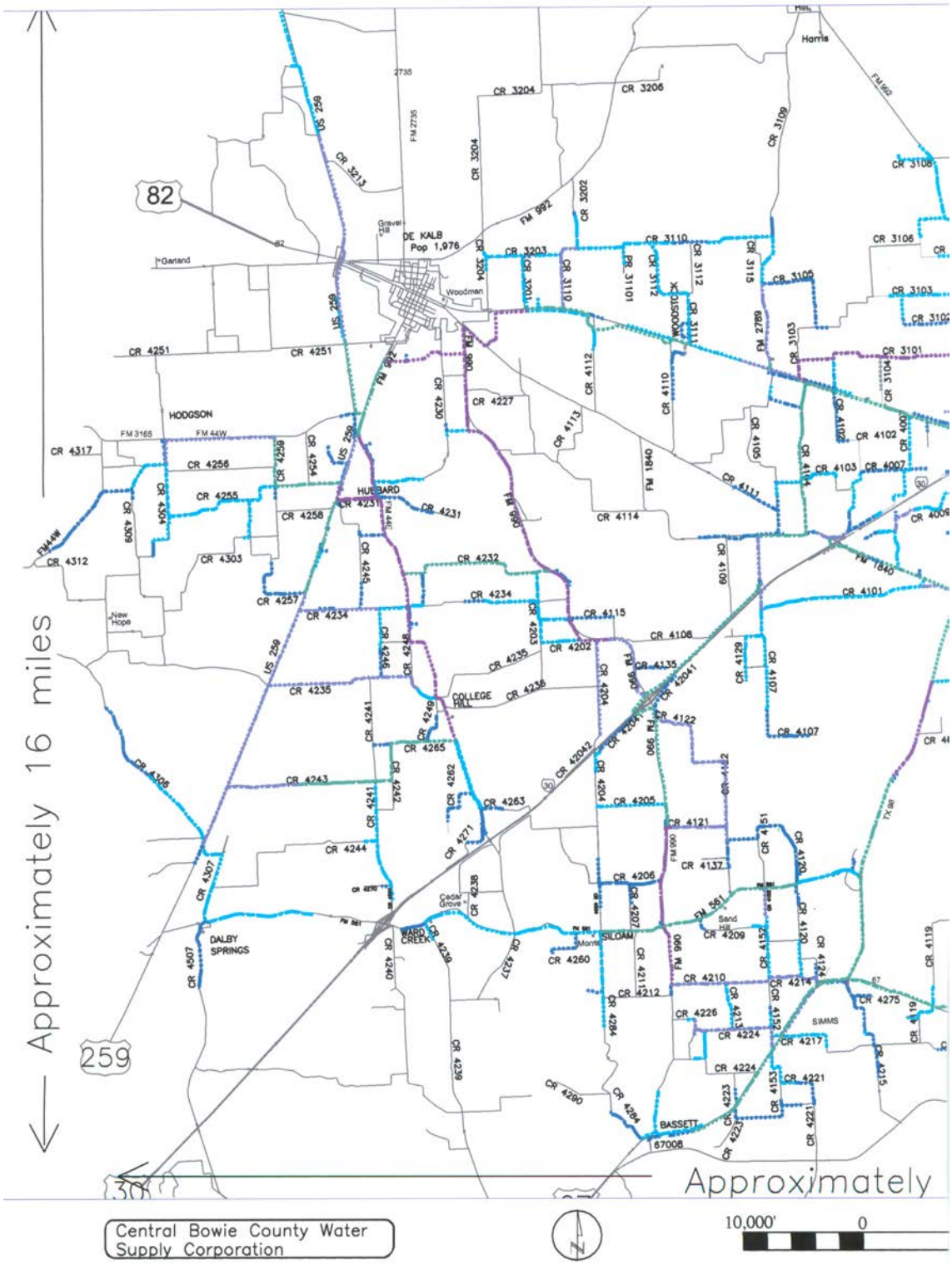
Variances granted by CBCWSC shall be subject to the following conditions, unless waived or modified by the general manager or his/her designee:

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

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

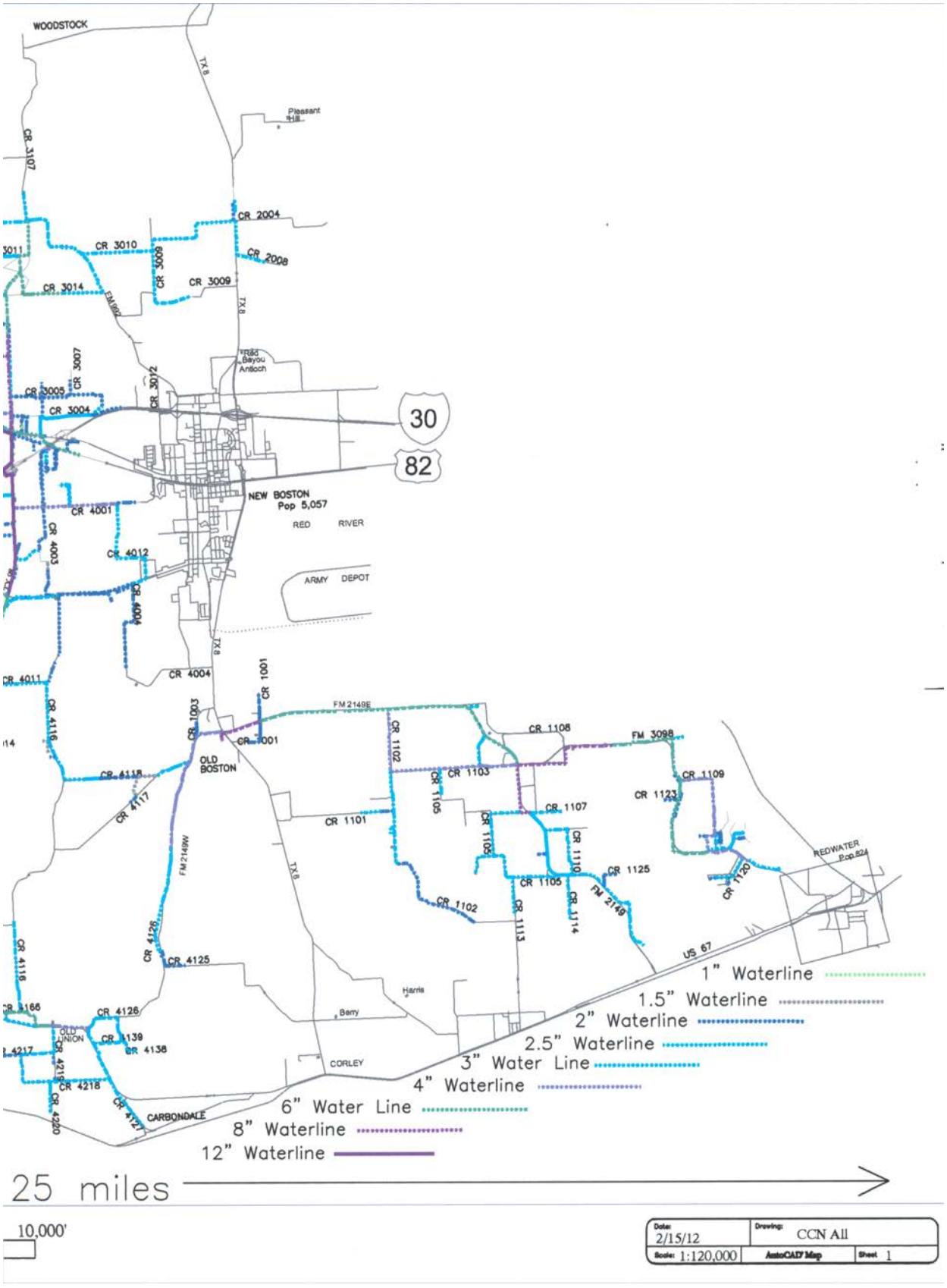
APPENDIX D

WATER CONSERVATION PLAN MAP 1



APPENDIX E

WATER CONSERVATION PLAN MAP 2



Drought Contingency Plan
for
Central Bowie County Water Supply Corporation (CBCWSC)

PO Box 306
2822 Hwy 82 West
New Boston, Texas 75570

Adopted: 8/1/2000

Effective: 8/1/2000

Revised: 9/9/2008

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1. Declaration of Policy, Purpose, and Intent

In order to conserve the available water supply and protect the integrity of water supply facilities, with particular regard for domestic water use, sanitation, 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 Central Bowie County Water Supply Corporation (CBCWSC) hereby adopts the following regulations and restrictions on the delivery and consumption of water. Water uses regulated or prohibited under this Drought Contingency Plan (the Plan) are considered to be non-essential and continuation of such uses during times of water shortage or other emergency water supply condition are deemed to constitute a waste of water which subjects the offender(s) to penalties as defined in Section XI of this Plan.

2. Public Involvement

Opportunity for the public to provide input into the preparation of the Plan was provided by CBCWSC by means of newspapers.

3. Public Education

CBCWSC will periodically provide the public with information about the Plan, including information about the conditions under which each stage of the Plan is to be initiated or terminated and the drought response measures to be implemented in each stage. This information will be provided by means of press releases.

4. Coordination with Regional Water Planning Groups

The service area of CBCWSC is located within the Northeast Texas Region (D) and CBCWSC has provided a copy of this Plan to the Northeast Texas Municipal Water District.

5. Authorization

The general manager, or his/her designee is hereby authorized and directed to implement the applicable provisions of this Plan upon determination that such implementation is necessary to protect public health, safety, and welfare. The general manager, or his/her designee, shall have the authority to initiate or terminate drought or other water supply emergency response measures as described in this Plan.

6. Application

The provisions of this Plan shall apply to all persons, customers, and property utilizing water provided by the CBCWSC The terms "person" and "customer" as used in the Plan include individuals, corporations, partnerships, associations, and all other legal entities.

7. Definitions

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

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

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

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

7.4 Customer: any person, company, or organization using water supplied by CBCWSC.

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

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

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

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

7.9 Non-essential water use: water uses that are not essential, nor required, for the protection of public, health, safety, and welfare, including:

7.9.1 irrigation of landscape areas, including parks, athletic fields, and golf courses, except otherwise provided under this Plan;
7.9.2 use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle;
7.9.3 use of water to wash down any sidewalks, walkways, driveways, parking lots,

tennis courts, or other hard-surfaced areas;
7.9.4 use of water to wash down buildings or structures for purposes other than immediate fire protection;
7.9.5 flushing gutters or permitting water to run or accumulate in any gutter or street;
7.9.6 use of water to fill, refill, or add to any indoor or outdoor swimming pools or Jacuzzi-type pools;
7.9.7 use of water in a fountain or pond for aesthetic or scenic purposes except where necessary to support aquatic life;
7.9.8 failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s); and
7.9.9 use of water from hydrants for construction purposes or any other purposes other than fire fighting.

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

8. Criteria for Initiation and Termination of Drought Response Stages

The general manager or his/her designee shall monitor water supply and/or demand conditions on a daily basis and shall determine when conditions warrant initiation or termination of each stage of the Plan, that is, when the specified "triggers" are reached.

8.1 Stage 1 Triggers -- MILD Water Shortage Conditions

8.1.1 Requirements for initiation

Customers shall be requested to voluntarily conserve water and adhere to the prescribed restrictions on certain water uses, defined in Section VII— Definitions, when, pursuant to requirements specified in the CBCWSC wholesale water purchase contract with Texarkana Water Utilities, notification is received requesting initiation of Stage 1 of the Drought Contingency Plan.

8.1.2 Requirements for termination

Stage 1 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of 3 consecutive days.

8.2 Stage 2 Triggers -- MODERATE Water Shortage Conditions

8.2.1 Requirements for initiation

Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses provided in Section IX of this Plan when, pursuant to requirements specified in the CBCWSC wholesale water purchase contract with Texarkana Water Utilities, notification is received requesting initiation of Stage 2 of the Drought Contingency Plan.

8.2.2 Requirements for termination

Stage 2 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of 3 consecutive days. Upon termination of Stage 2, Stage 1 becomes operative.

8.3 Stage 3 Triggers -- SEVERE Water Shortage Conditions

8.3.1 Requirements for initiation

Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses for Stage 3 of this Plan when, pursuant to requirements specified in the CBCWSC wholesale water purchase contract with Texarkana Water Utilities, notification is received requesting initiation of Stage 3 of the Drought Contingency Plan.

8.3.2 Requirements for termination

Stage 3 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of 3 consecutive days. Upon termination of Stage 3, Stage 2 becomes operative.

8.4 Stage 4 Triggers — CRITICAL Water Shortage Conditions

8.4.1 Requirements for initiation

Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses for Stage 4 of this Plan when, pursuant to requirements specified in the CBCWSC wholesale water purchase contract with Texarkana Water Utilities, notification is received requesting initiation of Stage 4 of the Drought Contingency Plan.

8.4.2 Requirements for termination

Stage 4 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of 3 consecutive days. Upon termination of Stage 4, Stage 3 becomes operative.

8.5 Stage 5 Triggers — EMERGENCY Water Shortage Conditions

8.5.1 Requirements for initiation

Customers shall be required to comply with the requirements and restrictions for Stage 5 of this Plan when general manager, or his/her designee, determines that a water supply emergency exists based on:

8.5.1.1 Major water line breaks, or pump or system failures occur, which cause unprecedented loss of capability to provide water service; and

8.5.1.2 Natural or man-made contamination of the water supply source(s).

8.5.2 Requirements for termination

Stage 5 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of 3 consecutive days.

8.6 Stage 6 Triggers — WATER ALLOCATION

8.6.1 Requirements for initiation

Customers shall be required to comply with the water allocation plan prescribed in Section IX of this Plan and comply with the requirements and restrictions for Stage 6 of this Plan when, pursuant to requirements specified in the CBCWSC wholesale water purchase contract with Texarkana Water Utilities, notification is received requesting initiation of Stage 6 of the Drought Contingency Plan.

8.6.2 Requirements for termination

Water allocation may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of 3 consecutive days.

9. Drought Response Stages

The general manager, or his/her designee, shall monitor water supply and/or demand conditions on a daily basis and, in accordance with the triggering criteria set forth in Section VIII of this Plan, shall determine that a mild, moderate, severe, critical, emergency or water shortage condition exists and shall implement the following notification procedures:

9.1 Notification

9.1.1 Notification of the Public:

The general manager or his/ here designee shall notify the public by means of:

Publication in a newspaper of general circulation,
direct mail to each customer,
signs posted in public places.

9.1.2 Additional Notification:

The general manager or his/her designee shall notify directly, or cause to be notified directly, the following individuals and entities:

CBCWSC Board of Directors
Mayors (New Boston, Dekalb)
Fire Chiefs (NBVFD, DVFD, SVFD)
County Emergency Management Coordinator
County Judge

9.2 Stage 1 Response -- MILD Water Shortage Conditions

9.2.1 Goal: Achieve a voluntary 10 percent reduction in total water use.

9.2.2 Supply Management Measures: Reduced or discontinued flushing of water mains.

9.2.3 Voluntary Water Use Restrictions:

9.2.3.1 Water customers are requested to voluntarily limit the irrigation of landscaped areas to Sundays and Thursdays for customers with a street address ending in an even number (0, 2, 4, 6 or 8), and Saturdays and Wednesdays for water customers with a street address ending in an odd number (1, 3, 5, 7 or 9), and to irrigate landscapes only between the hours of midnight and 10:00 a.m. and 8:00 p.m. to midnight on designated watering days.

9.2.3.2 All operations of CBCWSC shall adhere to water use restrictions prescribed for Stage 2 of the Plan.

9.2.3.3 Water customers are requested to practice water conservation and to minimize or discontinue water use for non-essential purposes.

9.3 Stage 2 Response -- MODERATE Water Shortage Conditions

9.3.1 Goal: Achieve a 20 percent reduction in total water use.

9.3.2 Supply Management Measures: Reduced or discontinued flushing of water mains.

9.3.3 Water Use Restrictions.

Under threat of penalty for violation, the following water use restrictions shall apply to all persons:

9.3.3.1 Irrigation of landscaped areas with hose-end sprinklers or automatic irrigation systems shall be limited to Sundays and Thursdays for customers with a street address ending in an even number (0, 2, 4, 6 or 8), and Saturdays and Wednesdays for water customers with a street address ending in an odd number (1, 3, 5, 7 or 9), and irrigation of landscaped areas is further limited to the hours of 12:00 midnight until 10:00 a.m. and between 8:00 p.m. and 12:00 midnight on designated watering days. However, irrigation of landscaped areas is permitted at anytime if it is by means of a hand-held hose, a faucet filled bucket or watering can of five (5) gallons or less, or drip irrigation system.

9.3.3.2 Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle is prohibited except on designated watering days between the hours of 12:00 midnight and 10:00 a.m. and between 8:00 p.m. and 12:00 midnight. Such

washing, when allowed, shall be done with a hand-held bucket or a hand-held hose equipped with a positive shutoff nozzle for quick rises. Vehicle washing may be done at any time on the immediate premises of a commercial car wash or commercial service station. Further, such washing may be exempted from these regulations if the health, safety, and welfare of the public are contingent upon frequent vehicle cleansing, such as garbage trucks and vehicles used to transport food and perishables.
9.3.3.3 Use of water to fill, refill, or add to any indoor or outdoor swimming pools, wading pools, or Jacuzzi-type pools is prohibited except on designated watering days between the hours of 12:00 midnight and 10:00 a.m. and between 8 p.m. and 12:00 midnight.

9.3.3.4 Operation of any ornamental fountain or pond for aesthetic or scenic purposes is prohibited except where necessary to support aquatic life or where such fountains or ponds are equipped with a re-circulation system.

9.3.3.5 Use of water from hydrants shall be limited to fire fighting, related activities, or other activities necessary to maintain public health, safety, and welfare, except that use of water from designated fire hydrants for construction purposes may be allowed under special permit from CBCWSC

9.3.3.6 Use of water for the irrigation of golf course greens, tees, and fairways is prohibited except on designated watering days between the hours 12:00 midnight and 10:00 a.m. and between 8 p.m. and 12:00 midnight. However, if the golf course utilizes a water source other than that provided by CBCWSC, the facility shall not be subject to these regulations.

9.3.3.7 All restaurants are prohibited from serving water to patrons except upon request of the patron.

9.3.3.8 The following uses of water are defined as non-essential and are prohibited:

9.3.3.8.1 wash down of any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas;

9.3.3.8.2 use of water to wash down buildings or structures for purposes other than immediate fire protection;

9.3.3.8.3 use of water for dust control;

9.3.3.8.4 flushing gutters or permitting water to run or accumulate in any gutter or street; and

9.3.3.8.5 failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s).

9.4 Stage 3 Response -- SEVERE Water Shortage Conditions

9.4.1 Goal: Achieve a 35 percent reduction in total water use.

9.4.2 Supply Management Measures: Reduced or discontinued flushing of water mains.

9.4.3 Water Use Restrictions:

All requirements of Stage 2 shall remain in effect during Stage 3 except:

9.4.3.1 irrigation of landscaped areas shall be limited to designated watering days between the hours of 12:00 midnight and 10:00 a.m. and between 8 p.m. and 12:00 midnight and shall be by means of hand-held hoses, hand-held buckets, drip irrigation, or permanently installed automatic sprinkler system only. The use of hose-end sprinklers is prohibited at all times.

9.4.3.2 The watering of golf course tees is prohibited unless the golf course utilizes a water source other than that provided by the CBCWSC.

9.4.3.3 The use of water for construction purposes from designated fire hydrants under special permit is to be discontinued.

9.5 Stage 4 Response — CRITICAL Water Shortage Conditions

9.5.1 Goal: Achieve a 50 percent reduction in total water use.

9.5.2 Supply Management Measures: Reduced or discontinued flushing of water mains

9.5.3 Water Use Restrictions:

All requirements of Stage 2 and 3 shall remain in effect during Stage 4 except:

9.5.3.1 Irrigation of landscaped areas shall be limited to designated watering days between the hours of 6:00 a.m. and 10:00 a.m. and between 8:00 p.m. and 12:00 midnight and shall be by means of hand-held hoses, hand-held buckets, or drip irrigation only. The use of hose-end sprinklers or permanently installed automatic sprinkler systems are prohibited at all times.

9.5.3.2 Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle not occurring on the premises of a commercial carwash and commercial service stations and not in the immediate interest of public health, safety, and welfare is prohibited. Further, such vehicle washing at commercial car washes and commercial service stations shall occur only between the hours of 6:00 a.m. and 10:00 a.m. and between 6:00 p.m. and 10p.m.

9.5.3.3 The filling, refilling, or adding of water to swimming pools, wading pools, and Jacuzzi type pools is prohibited.

9.5.3.4 Operation of any ornamental fountain or pond for aesthetic or scenic purposes is prohibited except where necessary to support aquatic life or where such fountains or ponds are equipped with a re-circulation system.

9.5.3.5 No application for new, additional, expanded, or increased-in-size water service connections, meters, service lines, pipeline extensions, mains, or water service facilities of any kind shall be approved, and time limits for approval of such applications are hereby suspended for such time as this drought response stage or a higher-numbered stage shall be in effect.

9.6 Stage 5 Response -- EMERGENCY Water Shortage Conditions

9.6.1 Goal: Achieve a 60 percent reduction in total water use.

9.6.2 Supply Management Measures: Reduced or discontinued flushing of water mains

9.6.3 Water Use Restrictions:

All requirements of Stage 2, 3, and 4 shall remain in effect during Stage 5 except:

9.6.3.1 Irrigation of landscaped areas is absolutely prohibited.

9.6.3.2 Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle is absolutely prohibited.

9.7 Stage 6 Response -- WATER ALLOCATION

In the event that water shortage conditions threaten public health, safety, and welfare, the general manager is hereby authorized to allocate water according to the following water allocation plan:

9.7.1 Single-Family Residential Customers

9.7.1.1 The allocation to residential water customers residing in a single-family dwelling shall be as follows:

Persons per Household	Gallons per Month
1 or 2	6,000
3 or 4	7,000
5 or 6	8,000
7 or 8	9,000
9 or l0	10,000
11 or more	12,000

9.7.1.2 “Household” means the residential premises served by the customer’s meter.

"Persons per household" includes only those persons currently physically residing at the premises and expected to reside there for the entire billing period. It shall be assumed that a particular customer's household is comprised of two (2) persons unless the customer notifies the CBCWSC of a greater number of persons per household on a form prescribed by the general manager.

9.7.1.3 The general manager shall give his/her best effort to see that such forms are mailed, otherwise provided, or made available to every residential customer. If, however, a customer does not receive such a form, it shall be the customer's responsibility to go to the CBCWSC offices to complete and sign the form claiming more than two (2) persons per household.

9.7.1.4 New customers may claim more persons per household at the time of applying for water service on the form prescribed by the general manager.

9.7.1.5 When the number of persons per household increases so as to place the customer in a different allocation category, the customer may notify CBCWSC on such form and the change will be implemented in the next practicable billing period. If the number of persons in a household is reduced, the customer shall notify CBCWSC in writing within two (2) days. In prescribing the method for claiming more than two (2) persons per household, the general manager shall adopt methods to insure the accuracy of the claim.

9.7.1.6 Any person who knowingly, recklessly, or with criminal negligence falsely reports the number of persons in a household or fails to timely notify CBCWSC of a reduction in the number of person in a household shall be fined not less than $100.00.

9.7.1.7 Residential water customers shall pay the following surcharges:

$5.00 for the first 1,000 gallons over allocation.
$7.00 for the second 1,000 gallons over allocation.
$9.00 for the third 1,000 gallons over allocation.
$11.00 for each additional 1,000 gallons over allocation.

9.7.1.8 Surcharges shall be cumulative.

9.7.2 Master-Metered Multi-Family Residential Customers

9.7.2.1 The allocation to a customer billed from a master meter which jointly measures water to multiple permanent residential dwelling units (e.g., apartments, mobile homes) shall be allocated 6,000 gallons per month for each dwelling unit. It shall be assumed that such a customer's meter serves two dwelling units unless the customer notifies CBCWSC of a greater number on a form prescribed by the general manager).

9.7.2.2 The general manager shall give his/her best effort to see that such forms are mailed, otherwise provided, or made available to every such customer. If, however, a customer does not receive such a form, it shall be the customer's responsibility to go to the CBCWSC offices to complete and sign the form claiming more than two (2) dwellings. A dwelling unit may be claimed under this provision whether it is occupied or not.

9.7.2.3 New customers may claim more dwelling units at the time of applying for water service on the form prescribed by the general manager. If the number of dwelling units served by a master meter is reduced, the customer shall notify CBCWSC in writing within two (2) days. In prescribing the method for claiming more than two (2) dwelling units, the general manager shall adopt methods to insure the accuracy of the claim.

9.7.2.4 Any person who knowingly, recklessly, or with criminal negligence falsely reports the number of dwelling units served by a master meter or fails to timely notify CBCWSC of a reduction in the number of person in a household shall be fined not less than $200.00. Customers billed from a master meter under this provision shall pay the following monthly surcharges:

> $5.00 for 1,000 gallons over allocation up through 1,000 gallons for each dwelling unit.
> $7.00, thereafter, for each additional 1,000 gallons over allocation up through a second 1,000 gallons for each dwelling unit.
> $9.00, thereafter, for each additional 1,000 gallons over allocation up through a third 1,000 gallons for each dwelling unit.
> $11.00 thereafter for each additional 1,000 gallons over allocation.

9.7.2.5 Surcharges shall be cumulative.

9.7.3 Commercial Customers

9.7.3.1 A monthly water allocation shall be established by the general manager, or his/her designee, for each nonresidential commercial customer other than an industrial customer who uses water for processing purposes. The non-residential customer's allocation shall be approximately 75% percent of the customer's usage for corresponding month's billing period for the previous 12 months.

9.7.3.2 If the customer's billing history is shorter than 12 months, the monthly average for the period for which there is a record shall be used for any monthly period for which no history exists. Provided, however, a customer, 75 percent of whose monthly usage is less than 10,000 gallons, shall be allocated 8,000 gallons.

9.7.3.3 The general manager shall give his/her best effort to see that notice of each non-residential customer's allocation is mailed to such customer. It however, a

customer does not receive such notice; it shall be the customer's responsibility to contact CBCWSC to determine the allocation.

9.7.3.4 Upon request of the customer or at the initiative of the general manager, the allocation may be reduced or increased if;

9.7.3.4.1 the designated period does not accurately reflect the customer's normal water usage, or;

9.7.3.4.2 one nonresidential customer agrees to transfer part of its allocation to another nonresidential customer, or

9.7.3.4.3 other objective evidence demonstrates that the designated allocation is inaccurate under present conditions.

9.7.3.5 A customer may appeal an allocation established hereunder to the general manager.

9.7.3.6 Nonresidential commercial customers shall pay the following surcharges:

9.7.3.6.1 Customers whose allocation is 8,000 gallons through 10,000 gallons per month:

$5.00 per thousand gallons for the first 1,000 gallons over allocation.
$7.00 per thousand gallons for the second 1,000 gallons over allocation.
$9.00 per thousand gallons for the third 1,000 gallons over allocation.
$11.00 per thousand gallons for each additional 1,000 gallons over allocation.

9.7.3.6.2 Customers whose allocation is 10,000 gallons per month or more:

1 times the block rate for each 1,000 gallons in excess of the allocation up through 5 percent above allocation.
2 times the block rate for each 1,000 gallons from 5 percent through 10 percent above allocation.
3 times the block rate for each 1,000 gallons from 10 percent through 15 percent above allocation.
4 times the block rate for each 1,000 gallons more than 15 percent above allocation.

9.7.3.7 The surcharges shall be cumulative.

9.7.3.8 As used herein, "block rate" means the charge to the customer per 1,000 gallons at the regular water rate schedule at the level of the customer's allocation.

9.7.4 Industrial Customers

9.7.4.1 A monthly water allocation shall be established by the general manager, or his/her designee, for each industrial customer, which uses water for processing purposes. The industrial customer's allocation shall be approximately 90 percent of the customer's water usage baseline. Ninety (90) days after the initial imposition of the allocation for industrial customers, the industrial customer's allocation shall be further reduced to 85 percent of the customer's water usage baseline. The industrial customer's water use baseline will be computed on the average water use for the 12 month period ending prior to the date of implementation of Stage 2 of the Plan.

9.7.4.2 If the industrial water customer's billing history is shorter than 12 months, the monthly average for the period for which there is a record shall be used for any monthly period for which no billing history exists.

9.7.4.3 The general manager shall give his/her best effort to see that notice of each industrial customer's allocation is mailed to such customer. If, however, a customer does not receive such notice, it shall be the customer's responsibility to contact CBCWSC to determine the allocation, and the allocation shall be fully effective notwithstanding the lack of receipt of written notice.

9.7.4.4 Upon request of the customer or at the initiative of the general manager, the allocation may be reduced or increased if:

9.7.4.4.1 the designated period does not accurately reflect the customer's normal water use because the customer had shutdown a major processing unit for repair or overhaul during the period, or;
9.7.4.4.2 the customer has added or is in the process of adding significant additional processing capacity, or;
9.7.4.4.3 the customer has shutdown or significantly reduced the production of a major processing unit, or;
9.7.4.4.4 the customer has previously implemented significant permanent water conservation measures such that the ability to further reduce water use is limited, or;
9.7.4.4.5 the customer agrees to transfer part of its allocation to another industrial customer, or; (6) if other objective evidence demonstrates that the designated allocation is inaccurate under present conditions.

9.7.4.5 A customer may appeal an allocation established hereunder to the general manager.

9.7.4.6 Industrial customers shall pay the following surcharges:

9.7.4.6.1 Customers whose allocation is 6,000 gallons through 7,000 gallons per month:

\$5.00 per thousand gallons for the first 1,000 gallons over allocation.
\$7.00 per thousand gallons for the second 1,000 gallons over allocation.
\$9.00 per thousand gallons for the third 1,000 gallons over allocation.
\$11.00 per thousand gallons for each additional 1,000 gallons over allocation.

9.7.4.6.2 Customers whose allocation is 7,000 gallons per month or more:

1 times the block rate for each 1,000 gallons in excess of the allocation up through 5 percent above allocation.
2 times the block rate for each 1,000 gallons from 5 percent through 10 percent above allocation.
3 times the block rate for each 1,000 gallons from 10 percent through 15 percent above allocation.
4 times the block rate for each 1,000 gallons more than 15 percent above allocation.

9.7.4.7 The surcharges shall be cumulative.

9.7.4.8 As used herein, "block rate" means the charge to the customer per 1,000 gallons at the regular water rate schedule at the level of the customer's allocation.

10. Enforcement

10.1 No person shall knowingly or intentionally allow the use of water from CBCWSC for residential, commercial, industrial, agricultural, governmental, or any other purpose in a manner contrary to any provision of this Plan, or in an amount in excess of that permitted by the drought response stage in effect at the time pursuant to action taken by general manager, or his/her designee, in accordance with provisions of this Plan.

10.2 Any person who violates this Plan is guilty of a misdemeanor and, upon conviction shall be punished by a fine of not less than 100.00 dollars and not more than 250.00 dollars. Each day that one or more of the provisions in this Plan is violated shall constitute a separate offense. If a person is convicted of three or more distinct violations of this Plan, the general manager shall, upon due notice to the customer, be authorized to discontinue water service to the premises where such violations occur.

10.3 Services discontinued under such circumstances shall be restored only upon payment of a re-connection charge, hereby established at \$500.00, and any other costs incurred by CBCWSC in discontinuing service. In addition, suitable assurance must be given to the general manager that the same action shall not be repeated while the Plan is in effect. Compliance with this plan may also be sought through injunctive relief in the district court.

10.4 Any person, including a person classified as a water customer of CBCWSC, in apparent control of the property where a violation occurs or originates shall be presumed to be the violator, and proof that the violation occurred on the person's property shall constitute a rebuttable presumption that the person in apparent control of the property committed the violation, but any such person shall have the right to show that he/she did not commit the violation.

10.5 Parents shall be presumed to be responsible for violations of their minor children and proof that a violation, committed by a child, occurred on property within the parents' control shall constitute a rebuttable presumption that the parent committed the violation, but any such parent may be excused if he/she proves that he/she had previously directed the child not to use the water as it was used in violation of this Plan and that the parent could not have reasonably known of the violation.

10.6 Any employee of CBCWSC, police officer, or other county employee designated by the general manager, may issue a citation to a person he/she reasonably believes to be in violation of this Ordinance. The citation shall be prepared in duplicate and shall contain the name and address of the alleged violator, if known, the offense charged, and shall direct him/her to appear in the Justice of the Peace on the date shown on the citation for which the date shall not be less than 3 days nor more than 5 days from the date the citation was issued.

10.7 The alleged violator shall be served a copy of the citation. Service of the citation shall be complete upon delivery of the citation to the alleged violator, to an agent or employee of a violator, or to a person over 14 years of age who is a member of the violator's immediate family or is a resident of the violator's residence. The alleged violator shall appear in Justice of the Peace to enter a plea of guilty or not guilty for the violation of this Plan. If the alleged violator fails to appear in Justice of the Peace, a warrant for his/her arrest may be issued. A summons to appear may be issued in lieu of an arrest warrant. These cases shall be expedited and given preferential setting in Justice of the Peace court before all other cases.

11. Variances

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

11.1.1 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.
11.1.2 Alternative methods can be implemented which will achieve the same level of reduction in water use.

11.2 Persons requesting an exemption from the provisions of this Ordinance shall file a petition for variance with the CBCWSC within 5 days after the Plan or a particular drought response

stage has been invoked. All petitions for variances shall be reviewed by the general manager, or his/her designee, and shall include the following:

11.2.1 Name and address of the petitioner(s).
11.2.2 Purpose of water use.
11.2.3 Specific provision(s) of the Plan from which the petitioner is requesting relief.
11.2.4 Detailed statement as to how the specific provision of the Plan adversely affects the petitioner or what damage or harm will occur to the petitioner or others if petitioner complies with this Ordinance.
11.2.5 Description of the relief requested.
11.2.6 Period of time for which the variance is sought.
11.2.7 Alternative water use restrictions or other measures the petitioner is taking or proposes to take to meet the intent of this Plan and the compliance date.
11.2.8 Other pertinent information.

11.3 Variances granted by CBCWSC shall be subject to the following conditions, unless waived or modified by the general manager or his/her designee:

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

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

RESOLUTION NO. _____

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE CENTRAL BOWIE COUNTY WATER SUPPLY CORPORATION ADOPTING A DROUGHT CONTINGENCY PLAN.

WHEREAS, the Board recognizes that the amount of water available to the Central Bowie County Water Supply Corporation and its water utility customers is limited and subject to depletion during periods of extended drought;

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

WHEREAS, Section 12.1272 of the Texas Water Code and applicable rules of the Texas Natural Resource Conservation Commission require all public water supply systems in Texas to prepare a drought contingency plan; and

WHEREAS, as authorized under law, and in the best interests of the customers of the Central Bowie County Water Supply Corporation, the Board deems it expedient and necessary to establish certain rules and policies for the orderly and efficient management of limited water supplies during drought and other water supply emergencies;

NOW THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE CENTRAL BOWIE COUNTY WATER SUPPLY CORPORATION:

SECTION 1. That the Drought Contingency Plan attached hereto as Exhibit "A" and made part hereof for all purposes be, and the same is hereby, adopted as the official policy of the Central Bowie County Water Supply Corporation.

SECTION 2. That the general manager is hereby directed to implement, administer, and enforce the Drought Contingency Plan.

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

DULY PASSED BY THE BOARD OF DIRECTORS OF THE CENTRAL BOWIE COUNTY WATER SUPPLY CORPORATION ON THIS 1st day of August, 2000.

President, Board of Directors

ATTESTED TO:

Secretary, Board of Directors

RESOLUTION 090908b

A resolution of the Board of Directors of the Central Bowie County Water Supply Corporation

WHEREAS, the Central Bowie County Water Supply Corporation(CBCWSC) Drought Contingency Plan rates have not been updated to reflect the change in rates as established by the CBCWSC current tariff;

WHEREAS, the Drought Contingency Plan is not organized in a manner conducive to change;

WHEREAS, it is recommended by the General Manager that the document be updated;

NOW, THERFORE, BE IT RESOLVED BY THE CORPORATION that Central Bowie County Water Supply Corporation Drought Contingency Plan be amended as follows:

Section IX, Stage 6 Response, all references to rates of $4.00, $6.00, $8.00, and $10.00 be replaced with $5.00, $7.00, $9.00 and $11.00, respectively.

All Paragraphs are to be numbered.

This resolution shall take effect and be in force from and after the 9th day of September, 2008, being the date of its enactment.

The vote was: Yeas 9 Nays 0 Abstained 0

Central Bowie County Water Supply Corporation

Robert Knox
President

(SEAL)

Attest:

Calvin Pierce
Secretary-Treasurer

WATER CONSERVATION PLAN – ATLANTA, TEXAS

Approved Feb 18, 2013

The City of Atlanta, Texas purchases all drinking water from Texarkana Water Utilities (TWU). The City of Atlanta, Texas adopts the following water plan – in cooperation with TWU - for the purposes of limiting, conserving and rationing water during times of drought and to inspect and repair water lines.

1. **Minimum Requirements**

   A. Utility Profile: The Texarkana Water Utilities (TWU) serves the residents of Atlanta, TX. through a contract to purchase up to 2.1 MGD of potable water. In addition TWU provides potable water to residents of Texarkana, AR and Texarkana, TX as well as residents in Miller County, Arkansas and Bowie and Red River Counties in Texas. The total population served by the Utility is just over 100,000.

   The Utility has the ability to treat ad pump 33,000,000 gallons of water per day. The Utility has two (2) water treatment plants. The Wright Patman Water Treatment Plant treats water from Lake Wright Patman and has a daily capacity of 18,000,000 gallons per day. The Millwood Water Treatment Plant treats water from Millwood Lake and has a daily capacity of 15,000,000 gallons per day. Average daily flows are 17,000,000 gallons per day and the peak flow is approximately 28,300,000 gallons per day.

   The Utility has three (3) wastewater treatment plants. The South Regional Wastewater Treatment Plant has rated capacity of 18,000,000 gallons per day and serves the majority of the residents of Texarkana, Arkansas and Texarkana, Texas. The Wagner Creek Wastewater Treatment Plant has a northwest Texarkana, Wake Village and Nash, Texas. The McKinney Bayou Wastewater Treatment Plant has a rated capacity of 950,000 gallons per day and serves areas of north Texarkana, Arkansas and Texas.

   B. Specification of conservation goals: Atlanta believes the goal of its water conservation plan should be to reduce water consumption by five percent (5%) in two (2) years. This goal should be obtained by increasing public awareness of the importance of water conservation.

   C. Metering devices: The Utility has a meter located on the raw water supply line at the Wright Patman Water Treatment Plant and the influent point at the Millwood Water Treatment Plant. The meters are calibrated yearly. The City of Atlanta has a master meter at the purchased water delivery point at the Grandview pump station.

   D. Program for universal metering: The City of Atlanta currently meters all water users, including residents as well as City. The majority of existing small multi-family dwellings are currently individually metered and the Utility will work with developers to install individual meters at new apartment complexes. The City utility crew tests and repairs water meters, or provides replacement meters if necessary. The City has in place a program to replace all residential and small commercial

meters every fifteen (15) years. The City's computerized billing system automatically kicks out abnormally high meter readings so that they are checked to see if a leak has occurred at an account. Meter readers are trained to take notice if a water meter's indicator is spinning so that a leak is caught.

E. **Measures to determine and control unaccounted for uses of water:** The City's operations division does leak detection in the field. The City is working toward more accurate estimations of water use by using flow meters to measure flushing of water mains. Also, the City is educating the fire department about more accurate estimations of fire fighting water use.

F. **Program of continuing public education and information regarding water conservation:** The City will continue the existing education programs on water usage as well as expand them where necessary. The City staff makes presentations to local schools and encourages local schools to take tours of the water treatment plants to learn more about the sources and treatment of drinking water. The City has the ability to print water conserving messages on its customer's monthly bills. The City has also added water conservation tips on the City's website.

G. **Water rate structure which is not "promotional":** The City's existing rate structure does not encourage the wasting of water by lowering the rate as more water is used. The City's minimum residential water charge is $28.57 for the first 2,000 gallons of water and $3.29 per 1,000 gallons for all additional water. The minimum charge includes the cost of the water and administrative costs such as the reading of the meter and billing.

H. **Reservoir systems operations plan:** Both reservoirs that provide source water to the City of Atlanta (through Texarkana Water Utilities), Lake Wright Patman and Millwood Lake, are owned and operated by the U.S. Corps of Engineers. The Corps of Engineers controls the levels of both lakes and the release rates. The Corps has cooperated in the past with TWU and withheld releases from Lake Wright Patman during times of low lake levels.

I. **Means of implementation and enforcement**
   1. On February 18, 2013 the Atlanta, Texas City Council adopted this water conservation and drought contingency plan.
   2. The City of Atlanta will work with the Texarkana Water Utilities to implement and enforce the conservation plan. The City's Inspection Department currently enforces the local plumbing codes. The City does enforce the installation of low flow plumbing fixtures in all new residences and commercial establishments. The City also enforces a program of retro-fitting low flow fixtures into existing residences and commercial establishments when modifications to the plumbing system are made.

J. **Documentation of coordination with Regional Water Planning Groups:**
This Plan is coordinated with the Texarkana Water Utilities Plan which in turn used the Sulphur River Basin Authority's Water Conservation and Emergency Water

Demand Management Plan dated August 1996 as a guide for the preparation of the Drought Contingency Plan. A copy of the Sulphur River Basin's plan is attached.

2. Additional Content Requirements

A. **Program of leak detection, repair and water loss accounting:** The City's operations division does leak detection in the field.

B. **Record management system to record water pumped, water deliveries, water sales and water losses:** The City of Atlanta, TX maintains daily records of the amount of water delivered at the Grandview Plant delivery point. Texarkana Water Utilities maintains daily records of the amounts of raw water taken from both supply sources and the amount of treated water pumped into the distribution system. The City's billing system segregates residential, commercial and industrial accounts.

C. **Wholesale water supply contract requirements:** As wholesale water supply contracts are renewed or entered into after approval of this plan, the City will require the wholesale customer to develop and implement a water conservation plan or provide documentation that they already have a plan that has been approved by the TCEQ.

3. Additional Conservation Strategies

A. Conservation-oriented water rates: As previously stated the City's rates do not encourage the wasting of water by lowering the rate as more water is used. The City's rates escalate with use over 2,000 gallons.

B. **Adoption of ordinances, plumbing codes, and/or rules requiring water-conserving plumbing fixtures:** The City of Atlanta, Texas enforces the local plumbing codes. The City's Inspection department does enforce the installation of low flow plumbing fixtures in all new residences and commercial establishments.

C. **Program for the replacement or retrofit of water-conserving plumbing fixtures in existing structures:** The City also enforces a program of retro-fitting low flow fixtures into existing residence and commercial establishments when modifications to the plumbing system are made.

D. **Program for pressure control and/or reduction in the distribution system and/or for customer connections:** Atlanta does not have areas of high water pressure. The highest static water pressures in the City are approximately eighty pounds per square inch (80 psi).

E. **Program and/or ordinances for landscape water management:** Atlanta's climate hampers resident's ability to practice anything more limited "Xeriscaping". With average rainfall of almost fifty inches (50") many of the adapted, low-water using plants and grasses such as buffalo grass and pampa grass would die due to over watering from the rain in a normal year. Citizens can more efficiently use their

irrigation water by not over watering their lawns and mulching their flower beds to prevent evaporation.

F. **Method for monitoring the effectiveness and efficiency of the water conservation plan:** The Utility will review water sales to determine if the water conservation plan is effective. The review must take into account the number of new connections that have been made and the amount of rainfall during the year.

4. DROUGHT CONTINGENCY PLAN

1. Minimum Requirements

A. **Provisions to inform the public and opportunity for public input:** On February 18, 2013 the Atlanta, Texas City Council adopted this water conservation and drought contingency plan .

B. **Provisions for a program of public education regarding plan:** The City of Atlanta and Texarkana Water Utilities have a good working relationship with the local media sources and will in time of drought or other emergency water condition ask these media sources to help notify the public of the provisions of the plan.

C. D**ocumentation of coordination with the Regional Water Planning Groups:** This Plan is coordinated with the Texarkana Water Utilities Plan which in turn used the Sulphur River Basin Authority's Water Conservation and Emergency Water Demand Management Plan dated August 1996 as a guide for the preparation of the Drought Contingency Plan. A copy of the Sulphur River Basin's plan is attached.

D. **Description of the information to be monitored by the water supplier, and specific criteria for the initiation and termination of drought response stages:** The City of Atlanta will comply with all the restrictions issued by the Texarkana Water Utilities. In addition, our own City ordinances, approved 11-1-1993, for drought restrictions are as follows:

Sec. 11.403 Guidelines for Enforcement

(a) In regards to implementation and enforcement of the Conservation/Drought Contingency Plan the city manager is designated as the official responsible for implementation and enforcement, and the following guidelines are adopted:

(1) Mild drought occurs when:

(A) Average daily water consumption reaches 90% of production capacity, and

(B) Consumption at 90% of production capacity has existed for a period of three (3) days, and

(C) Long, cold, or dry weather periods are predicted.

(2) Moderate drought conditions are reached when:

(A) Average daily water consumption reaches 100% of rated production capacity for a three-day period.

(B) Weather forecasts indicate mild drought conditions will exist five (5) days or more.

(C) One (1) ground storage tank, one (1) elevated storage tank, or one (1) clear well is taken out of service during mild drought period.

(D) Storage water level is not being maintained during period of 100% rated production period.

(E) Existence of any one (1) listed condition for a duration of 36 hours.

(3) Severe drought classification is reached when:

(A) Average daily water consumption reaches 110% of production capacity.

(B) Average daily water consumption will not enable storage levels to be maintained.

(C) System demand exceeds available high service pump capacity.

(D) Any two (2) conditions listed in moderate drought classification occurs at the same time for a 24-hour period.

(E) Water system is contaminated either accidentally or intentionally. Severe condition is reached immediately upon detection.

(F) Water system fails - from acts of God (tornadoes, hurricanes) or man. Severe condition is reached immediately upon detection.

(b) In the event severe classification conditions persist (Item 3 above) for an extended period of time, the city may ration water usage and/or terminate service to selected users of the system in accordance with the following sequence: 1) recreational users, 2) commercial users, 3) industrial users, 4) school users, 5) residential users, 6) hospitals, public health and safety facilities.

(Ordinance 426, adopted 11/1/93, Section 3)

Sec. 11.404 Penalties

Users of city water except the city, that do not comply with Section 11.403 of this article shall be subject to a penalty and fine in accordance with the general penalty provision found in Section 1.106 of this code. (Ordinance 426, adopted 11/1/93, Section 4)

5. Texarkana Water Utilities Guidelines Hereby Adopted

A. During times of potential drought situations the staff of the Texarkana Water Utilities will monitor the level of lake Wright Patman and other critical system components. In addition, the City of Atlanta will monitor delivery volumes and storage tank levels. When the following conditions occur the City staff will declare a drought or other emergency condition:

1. When the level of Wright Patman Reservoir is 220.60 and falling.
2. When the raw water supply main from Wright Patman reservoir or the Millwood transmission main is out of service due to a break and treated water demand is 18 million gallons per day or higher.
3. When the high service pumps at the Wright Patman Water Treatment Plant or the Millwood Water Treatment Plant are out of service and treated water demand is 18 million gallons per day or higher.
4. When there is a supply source contaminations that causes either of the reservoirs that supplies Texarkana to be unusable and treated water demand is 18 million gallons per day or higher.
5. When levels in the City's water storage tanks reach 50% and are dropping.
6. When incoming water supply at the Grandview Pump Station (purchase point from TWU) is interrupted for more than 24 hours.

B. Implementation of plan in response to these situations: The Drought Contingency Plan will be initiated during any of the above mentioned criteria by notifying the Atlanta, Texas City Manager, City Council, and the Texas Commission on Environmental Quality (TCEQ).

C. Plan to include specific water supply or water demand management measures to be implemented during each stage of the plan including, but not limited to, the following: The City and TWU staff has developed a three (3) stage water demand management plan. As previously stated the City Manager, the City Council and the TCEQ will be notified as before each stage is implemented:

Stage 1 – Mild Water Shortage

Initiation:
The City of Atlanta and Texarkana Water Utilities will consider that a mild water shortage exists when any one (1) of the following conditions occurs:

(1) When the level of Wright Patman Reservoir is 220.60 and falling;
(2) When the raw water supply main from Wright Patman Reservoir or the Millwood transmission main is out of service due to a break and treated water demand is 18 million gallons per day or higher;
(3) When the high service pumps at the Wright Patman Water Treatment Plant or the Millwood Water Treatment Plant are out of service and treated water demand is 18 million gallons per day or higher;
(4) When there is a supply source contamination that causes either of the reservoirs that supplies Texarkana to be unusable and treated water demand is 18 million gallons per day or higher.
(5) When levels in the City's water storage tanks reach 50% and are dropping.
(6) When incoming water supply at the Grandview Pump Station (purchase point from TWU) is interrupted for more than 24 hours.

Target Goal:
Inform the general public of the situation and encourage the wise use of water.

Measures:
(1) When the mild water shortage conditions exist, the City of Atlanta will inform its customers of the drought condition by mail or telephone
(2) The customers will be asked to provide information and answer inquiries from their citizens
(3) The City of Atlanta will advise its customers of the condition(s) that are causing the water shortage. And begin enforcement of individual emergency measures.

Termination:
Stage 1 shall be rescinded either by rising lake or tank levels and reduced water demand, repair of the transmission mains or pumps, or the contaminant level in the reservoir has been reduced to acceptable levels.

Water Management Strategies:
During Stage 1 the City will ask citizens to curtail the outdoor use of water for non-essential uses such as car washing and irrigation through media sources such as the newspaper, television, radio.

Stage 2 – Moderate Water Shortage

Initiation:
The City of Atlanta and Texarkana water Utilities will consider that a mild water shortage exists when any two (2) of the following conditions occurs:
(1) When the level of Wright Patman Reservoir is 220.60 and falling;

(2) When the raw water supply main from Wright Patman Reservoir or the Millwood transmission main is out of service due to a break and treated water demand is 18 million gallons per day or higher;
(3) When the high service pumps at the Wright Patman Water Treatment Plant or the Millwood Water Treatment Plant are out of service and treated water demand is 18 million gallons per day or higher;
(4) When there is a supply source contamination that causes either of the reservoirs that supplies Texarkana to be unusable and treated water demand is 18 million gallons per day or higher.
(5) When levels in the City's water storage tanks reach 50% and are dropping.
(6) When incoming water supply at the Grandview Pump Station (purchase point from TWU) is interrupted for more than 24 hours.

Target Goal:
When a moderate water shortage exists, the Texarkana Water Utilities will implement water management strategies in an attempt to achieve a thirty percent (30%) voluntary reduction in non-essential water use.

Termination:
Stage 2 shall be rescinded by either rising lake or tank levels and reduced water demand, repair of the transmission mains or pumps, or the contaminant level in the reservoir has been reduced to acceptable levels. Upon termination of Stage 2, Stage 1 becomes operative.

Water Management Strategies:
During Stage 2 the City will implement voluntary lawn irrigation restrictions through the media. The public will be notified through media sources such as the newspaper, television and radio. The City will prohibit such other non-essential outdoor uses such as car washing, filling of swimming pools, etc.

Stage 3 – Severe Water Shortage

Initiation:
The City of Atlanta will consider that a mild water shorage exists when any three (3) of the following conditions occurs:

(1) When the level of Wright Patman Reservoir is 220.60 and falling;
(2) When the raw water supply main from Wright Patman Reservoir or the Millwood transmission main is out of service due to a break and treated water demand is 18 million gallons per day or higher;

(3) When the high service pumps at the Wright Patman Water Treatment Plant or the Millwood Water Treatment Plant are out of service and treated water demand is 18 million gallons per day or higher;
(4) When there is a supply source contamination that causes either of the reservoirs that supplies Texarkana to be unusable and treated water demand is 18 million gallons per day or higher.
(5) When levels in the City's water storage tanks reach 50% and are dropping.
(6) When incoming water supply at the Grandview Pump Station (purchase point from TWU) is interrupted for more than 24 hours.

Target Goal:
When a severe water shortage exists, the Texarkana Water Utilities will implement water management strategies in an attempt to achieve a ninety percent (90%) voluntary reduction in non-essential outdoor water use and a thirty percent (30%) reduction in total water use.

Termination:
Stage 3 shall be rescinded by either rising lake or tank levels and reduced water demand, repair of the transmission mains or pumps, or the contaminant level in the reservoir has been reduced to acceptable levels. Upon termination of Stage 3, Stage 2 becomes operative.

Water Management Strategies:
During Stage 3 the City will enforce a policy whereby the use of water for any outdoor activity is banned. The public will be notified through media sources such as the newspaper, television and radio. The City will notify the Executive Director of TCEQ within five (5) business days of implementing any mandatory provisions of the drought contingency plan. If the restrictions of this stage of the plan cause undue hardship on a customer, the customer may request a variance from the City of Atlanta, Texas City Council. These requests will be considered on a case-by-case basis.

Stage 4 – Emergency Water Shortage

Initiation:
The City of Atlanta will consider that an emergency water shortage exists when the Utility is unable to produce or provide treated water from both water treatment plants, Wright Patman and Millwood, at the same time. Or when levels in the City's water storage tanks reach 25% and are dropping. Or when incoming water supply at the Grandview Pump Station (purchase point from TWU) is interrupted for more than 72 hours.

Target Goal:

When an emergency water shortage exists, the City will implement water management strategies in an attempt to provide a 100% reduction in non-essential water use and a 75% reduction in overall water use.

Termination:
Stage 4 shall be rescinded when either of the water treatment plants, Wright Patman or Millwood, are capable of pumping potable water into the distribution system. Or when purchase point delivery resumes and City storage tank levels are rising.

Water Management Strategies:

During Stage 4 the Utility request that customers only use water for sanitary purposes. The public will be notified through media sources such as the newspaper, television and radio. The City will notify the Executive Director of TCEQ within five (5) business days of implementing any mandatory provisions of the drought contingency plan. If the restrictions of this stage of the plan cause undue hardship on a customer, the customer may request a variance from the City of Atlanta, Texas City Council. These requests will be considered on a case-by-case basis.

E. **Plan to include procedures to be followed for the initiation or termination of each drought response stage, including procedures for notification of the public:** As the conditions that initiated the need to implement the Drought Contingency Plan are abated, either by rising lake or tank levels and reduced water demand or repair of the trans mission mains, the City will terminate the stages of the water demand management plan in reverse order of their implementation. All parties that were notified by the initiation of the plan will also be notified of the termination of the plan.
F. **Procedures for granting variances to the plan:** Citizens or businesses seeking variances to any stage of the plan will be required to submit them to the City of Atlanta, Texas City Council. The City Council will conduct public hearings as to why the variance should be granted and will vote upon the granting of the variance.
G. **Procedures for the enforcement of any mandatory water use restrictions, including specification of penalities for violations of such restrictions:** The City staff will work closely with the Atlanta, Texas City Attorney's office and the Atlanta, Texas Police Department to develop procedures for the enforcement of mandatory water use restrictions. The City has ordinances in place to enforce water conservation.
H. **Review and Update** – This plan will be reviewed and updated on or before February 18, 2017.

CITY OF TEXARKANA, TEXAS
WATER CONSERVATION &
DROUGHT CONTINGENCY PLAN

Name of Entity: Texarkana Water Utilities

Address & Zip; 801 Wood Street, Texarkana, Texas 75501

Telephone Number: (903) 798-3800 Fax: (903) 793-0610

Prepared By: J.D. Phillips, P.E.

Title: Executive Director

Signature:_____ Date:_____

Name and Phone Number of Person/Department Responsible for Implementing a Water Conservation Program: J.D. Phillips, P.E.
Texarkana Water Utilities
(903) 798-3821

A. WATER CONSERVATION PLAN - TEXARKANA, TEXAS

1. Minimum Requirements

A. **Utility Profile:** The Texarkana Water Utilities serves the residents of Texarkana, Arkansas and Texarkana, Texas as well as providing potable water to residents in Miller County, Arkansas and Bowie and Red River Counties in Texas. The total population served by the Utility is just over 100,000. The Utility has approximately 24,643 accounts in both Texarkanas that serve a population of approximately 67,633. Total gallons per capita day (GPCD) were 157 in 2016 and residential GPCD was 71 in 2016.

The Utility has the ability to treat and pump 33,000,000 gallons of water per day. The Utility has two (2) water treatment plants. The Wright Patman Water Treatment Plant treats water from Lake wright Patman and has a daily capacity of 18,000,000 gallons per day. The Millwood Water

Treatment Plant treats water from Millwood Lake and has a daily capacity of 15,000,000 gallons per day. Average daily flows are 15,000,000 gallons per day and the peak flow is approximately 28,300,000 gallons per day.

The Utility has three (3) wastewater treatment plants. The South Regional Wastewater Treatment Plant has a rated capacity of 18,000,000 gallons per day and serves the majority of the residents of Texarkana, Arkansas and Texarkana, Texas. The Wagner Creek Wastewater Treatment Plant has a rated capacity of 2,000,000 gallons per day and serves residents of northwest Texarkana, Wake Village and Nash, Texas. The McKinney Bayou Wastewater Treatment Plant has a rated capacity of 950,000 gallons per day and serves areas of north Texarkana, Arkansas and Texas.

B. **Record management system to record water pumped, water deliveries, water sales and water losses:** The Texarkana Water Utilities implemented a new billing software in January of 2018. The new billing software has the capability to classify water sales into residential (single family and multi-family), commercial, institutional, industrial, agricultural and wholesale.

The Texarkana Water Utilities maintains daily records of the amounts of raw water taken from both supply sources and the amount of treated water pumped into the distribution system

C. **Specification of conservation goals:** Texarkana believes the goal of its water conservation plan should be to reduce water consumption from its present 5 year average gallons per capita daily (GPCD) of 152 GPCD to 150 GPCD by 2023 and 145 GPCD by 2028. The goal for residential GPCD is 65 GPCD by 2023 and 60 GPCD by 2028. Water loss goals are 12 GPCD by 2023 and 10 GPCD by 2028. The goal for water loss percentage is 8% by 2023 and 7% by 2028. These goals should be obtained by increasing the public awareness of the importance of water conservation and the retrofit plumbing program.

D. **Metering devices:** The Utility has a meter located on the raw water supply line at the Wright Patman Water Treatment Plant and the influent point at the Millwood Water Treatment Plant. The meters are calibrated yearly to maintain an accuracy of plus or minus 5.0%. The Texarkana Water Utilities maintains daily records of the amounts of raw water taken from both supply sources and the amount of treated water pumped into the distribution system.

E. **Program for universal metering:** The Texarkana Water Utilities currently meters all water users, including the Utility, City and other public facilities. The majority of existing small multi-family dwellings are currently individually metered and the Utility is working with developers to install individual meters at new apartment complexes. The Utility has a meter shop that both tests and repairs water meters. The Utility has in place a program to replace all residential and small commercial meters approximately every ten (10) years as the meters age and accuracy diminishes. Money is budgeted for this program in the Utility's annual budget. The Utility has a goal to test large commercial meters every year to insure their accuracy. The Utility's computerized billing system automatically kicks out abnormally high meter readings so that they are checked to see if a leak has occurred at an account. Meter readers are trained to take notice if a water meter's leak indicator is turning so that a leak is caught.

F. **Measures to determine and control unaccounted for uses of water:** The Utility's operations division does leak detection in the field. The operations division has leak detection equipment and has received training from the Texas Water Development Board in its proper use. The Utility staff will continue to utilize the leak detection equipment in areas where metering totals indicate a loss, where unexplained wet areas appear and when operations division employees suspect a leak. The Utility's customer service division distributes dye tablets to customers to determine if the customer has a leaking toilet bowl. The Utility also requires that backflow prevention devices installed on fire mains have detector assemblies installed so that illegal connections to fire systems can be discovered. Meters readers look for illegal connections as they run their routes and look at the leak indicators on the water meters. The Utility also budgets funds to replaces sections of two inch (2") galvanized water main each year.

G. **Program of continuing public education and information regarding water conservation:** The Texarkana Water Utilities will continue the existing education programs on water usage as well as expand them where necessary. The Utility staff regularly makes presentations to local schools and encourages local schools to take tours of the water treatment plants to learn more about the sources and treatment of drinking water. The Utility has the ability to print water conserving messages on its customers monthly bills and has done so in the past. The Utility also distributes water conservation literature prepared by the Texas Water Development Board and the American Water Works Association. The Utility has also added water conservation tips on the Utility's web site.

H. **Water rate structure which is not "promotional":** The Utility implemented conservation water rates on October 1, 2015 which use a tiered rate structure. There are five (5) tiers based upon water usage for residential customers. The rate structure is comprised of two (2) components - a fixed service charge and a volume charge based upon water consumption. The Utility's minimum residential water charge is $8.15 for the service charge and $1.75 per1,000 gallons for the first 2,000 gallons of water, $2.00 per 1,000 gallons for the next 3,000 gallons of water, $3.25 per 1000 gallons for the next 2,000 gallons of water, $3.75 per 1,000 gallons for the next 3,000 gallons of water and $4.00 per 1,000 gallons for all water usage over 10,000 gallons. The Utility's minimum commercial water charge is $9.28 for the service charge and $3.25 per 1,000 gallons for all water. The commercial service charge increases as the size of the meter increases. The service charge includes administrative costs such as the reading of the meter and billing.

I. **Reservoir systems operations plan:** Both reservoirs that the Texarkana Water Utilities draws from, Lake Wright Patman and Millwood Lake, are owned and operated by the U.S. Corps of Engineers. The Corps of Engineers controls the levels of both lakes and the release rates. The Corps has cooperated in the past with Utility and withheld releases from Lake Wright Patman during times of low lake levels.

J. **Means of implementation and enforcement**

1. On January 27, 1997 the Texarkana, Texas City Council adopted a water conservation and drought contingency plan that was prepared by the Texarkana Water Utilities and accepted by the Texas Water Development Board on February 19, 1997.

2. The Texarkana Water Utilities will work with the City of Texarkana, Texas to implement and enforce the conservation plan. The City's Inspection Department currently enforces the local plumbing codes. The City does enforce the installation of low flow plumbing fixtures in all new residences and commercial establishments. The City also enforces a program of retro-fitting low flow fixtures into existing residences and commercial establishments when modifications to the plumbing system are made.

K. **Documentation of coordination with Regional Water Planning Groups:**
The Sulphur River Basin Authority's Water Conservation and Emergency

Water Demand Management Plan dated August 1996 was used as a guide for the preparation of the Drought Contingency Plan.

2. **Additional Content Requirements**

A. **Program of leak detection, repair and water loss accounting:** The Utility's operations division does leak detection in the field. The operations division has leak detection equipment and has received training from the Texas Water Development Board in its proper use. The Utility staff will continue to utilize the leak detection equipment in areas where metering totals indicate a loss, where unexplained wet areas appear and when operations division employees suspect a leak. Water Utilities' customer service representatives also work with residents to determine if there are leaks on the customer's side of the water. One of the ways this is accomplished is by distributing dye tablets to customers to determine if the customer has a leaking toilet bowl.

B. **Wholesale water supply contract requirements:** As wholesale water supply contracts are renewed or entered into after approval of this plan, the Utility will require the wholesale customer to develop and implement a water conservation plan or provide documentation that they already have a plan that has been approved by the TCEQ.

C. **Identification of Alternative Water Sources**

1. Amount of water needed for various durations - The Average daily demand for Texarkana and its wholesale customers is 15,000,000 gallons per day. During times of emergency the Utility can and will implement the existing water conservation plan to curtail the use of water.

2. Emergency water shipments - The Utility can request the emergency shipment of water by the local National Guard and Army and Marine Corps Reserve Units.

3. Emergency water supply sources - TWU currently uses the two largest raw water supply sources available in the area as its water sources. Lake Wright Patman is located in northeast Texas in the Sulphur River basin and Millwood Reservoir is located in southwest Arkansas in the Little River basin. Bringle Lake was the primary source of raw water before Lake Wright Patman was constructed and the Red River has been used in the past as a source of raw water during an emergency, but the pumping capabilities

that existed at those times are no longer in place.

4. Identification of alternate storage and treatment sources - If both of Texarkana's water treatment plants were disabled for an extended period of time, the Utility may be able to establish a connection with the water treatment plant located at the Domtar paper mill in Ashdown, Arkansas. The paper mill is located within two (2) miles of the Millwood Water Treatment Plant and has a large treatment capacity.

5. Regional aid agreements (interconnections) - TWU does not currently have any regional aid agreements with other water utilities due to the geography of the region.

3. **Additional Conservation Strategies**

A. **Conservation-oriented water rates:** As previously stated the Utility's rates do not encourage the wasting of water by lowering the rate as more water is used. The Utility's rate structure is an inclining block rate.

B. **Adoption of ordinances, plumbing codes, and/or rules requiring water-conserving plumbing fixtures:** The City of Texarkana, Texas enforces the local plumbing codes. The City's Inspection Department does enforce the installation of low flow plumbing fixtures in all new residences and commercial establishments.

C. **Program for the replacement or retrofit of water-conserving plumbing fixtures in existing structures:** The City also enforces a program of retro-fitting low flow fixtures into existing residences and commercial establishments when modifications to the plumbing system are made.

D. **Reuse and/or recycling of wastewater and/or greywater:** The Utility has researched the possibility of recycling wastewater with limited results. The Utility uses the treated effluent at the South Regional Wastewater Treatment (SRWWTP) for flushing pump seals and other applications where non-potable water can be used. The remoteness of the SRWWTP from potential users has limited the possibility of recycling the effluent.

E. **Program for pressure control and/or reduction in the distribution system and/or for customer connections:** Texarkana does not have areas of high water pressure. The highest static water pressures in the City are approximately eighty pounds per square inch (80 psi).

F. **Program and/or ordinances for landscape water management:** Texarkana's climate hampers residents ability to practice anything more limited "Xeriscaping". With average rainfall of almost fifty inches (50") many of the adapted, low-water using plants and grasses such as buffalo grass and pampa grass would die due to over watering from the rain in a normal year. Citizens can more efficiently use their irrigation water by not over watering their lawns and mulching their flower beds to prevent evaporation. The Utility provides mulching material to its customers at a nominal cost as part of its composting section.

G. **Method for monitoring the effectiveness and efficiency of the water conservation plan:** The Utility will review water sales to determine if the water conservation plan is effective. The review must take into account the number of new connections that have been made and the amount of rainfall during the year.

B. DROUGHT CONTINGENCY PLAN

1. Minimum Requirements

A. **Provisions to inform the public and opportunity for public input:** On April 23, 2018 the Texarkana, Texas City Council adopted the revised water conservation and drought contingency plan that was prepared by the Texarkana Water Utilities. The plan was approved at an open City Council Meeting and there was the opportunity for public input at this time.

B. **Provisions for a program of public education regarding plan:** The Texarkana Water Utilities has a good working relationship with the local media sources and will in time of drought or other emergency water condition ask these media sources to help notify the public of the provisions of the plan.

C. **Documentation of coordination with the Regional Water Planning Groups:** The service area of the Texarkana Water Utilities is located within the Northeast Texas Regional Water Planning Group and the Texarkana Water Utilities has provided a copy of this water conservation plan to the Northeast Regional Water Planning Group.

D. **Description of the information to be monitored by the water supplier,**

and specific criteria for the initiation and termination of drought response stages: During times of potential drought situations the staff of the Texarkana Water Utilities will monitor the level of lake Wright Patman and other critical system components. When the following conditions occur the Utility staff will declare a drought or other emergency condition:

1. When the level of Wright Patman Reservoir is 220.60 and falling.
   a. The conservation pool elevation for Lake Wright Patman is 220.60. If the level of the lake drops below this elevation the Texarkana Water Utilities will have to curtail production at the Wright Patman Water Treatment Plant until a channel can be dredged to the existing intake structure and modifications made to the intake structure.
   b. The drought of 2010 - 2011 is the most severe drought that has occurred since Lake Wright Patman was impounded. During the drought of 2010 - 2011, the minimum lake elevation that occurred was 222.84.

2. When the raw water supply from Wright Patman reservoir is unavailable due to low service pump failure or the raw water transmission main is out of service due to a break or the Millwood transmission main is out of service due to a break and treated water demand is 18 million gallons per day or higher.
   a. Raw water is pumped to the Wright Patman Water Treatment Plant through a thirty-three inch (33") main and treated water is pumped to Texarkana from the Millwood Water Treatment Plant through a forty-two inch (42") main. If either one of the mains is damaged Texarkana looses the capacity of the respective plant.
   b. The Wright Patman Water Treatment Plant is rated at 18 million gallons per and the Millwood Water Treatment Plant can be operated at a rate of 20 million gallons per day in an emergency.
   c. The average daily usage for the Texarkana Water Utilities is 15 million gallons per day, therefore either plant can produce enough water to meet the demands of the average day. If one of the plants were to go down during a period of high usage, residents will be rquested to implement water conservation practices until the plant is returned to service.

3. When the high service pumps at the Wright Patman Water

Treatment Plant or the Millwood Water Treatment Plant are out of service and treated water demand is 18 million gallons per day or higher.

a. Treated water is pumped from each of the water treatment plants into the water distribution system by the high service pumps located at each plant. The pumps can fail due to mechanical problems or loss of electrical service.

b. The Wright Patman Water Treatment Plant is rated at 18 million gallons per day and the Millwood Water Treatment Plant can be operated at a rate of 20 million gallons per day in an emergency.

c. The average daily usage for the Texarkana Water Utilities is 15 million gallons per day, therefore either plant can produce enough water to meet the demands of the average day. If one of the plants were to go down during a period of high usage, residents will be rquested to implement water conservation practices until the plant is returned to service.

4. When there is a supply source contamination that causes either of the reservoirs that supplies Texarkana to be unusable and treated water demand is 18 million gallons per day or higher.

a. If either of the lakes are contaminated, the Utility will shut down the low service pumps at the Lake Wright Patman raw water pump station or the internal low service pumps at the Millwood Water Treatment Plant until the source of contamination has been eliminated.

b. The Wright Patman Water Treatment Plant is rated at 18 million gallons per and the Millwood Water Treatment Plant can be operated at a rate of 20 million gallons per day in an emergency.

c. The average daily usage for the Texarkana Water Utilities is 15 million gallons per day, therefore either plant can produce enough water to meet the demands of the average day. If one of the plants were to go down during a period of high usage, residents will be rquested to implement water conservation practices until the plant is returned to service.

E. **Implementation of plan in response to these situations:** The Drought Contingency Plan will be initiated during any of the above mentioned criteria by notifying the Texarkana, Texas City Manager, City Council and the Texas Commission on Environmental Quality (TCEQ).

F. **Plan to include specific water supply or water demand management measures to be implemented during each stage of the plan including, but not limited to, the following:** The Utility staff has developed a four (4) stage water demand management plan. As previously stated the City Manager, the City Council and the TCEQ will be notified as before each stage is implemented:

Stage 1 - Mild Water Shortage

Initiation: The Texarkana Water Utilities will consider that a mild water shortage exists when any one (1) of the following conditions occurs:

(1) When the level of Wright Patman Reservoir is 220.60 and falling;
(2) When the raw water supply from Wright Patman Reservoir is unavailable due to low service pump failure or the raw water transmission main is out of service due to a break or the Millwood transmission main is out of service due to a break and treated water demand is 18 million gallons per day or higher;
(3) When the high service pumps at the Wright Patman Water Treatment Plant or the Millwood Water Treatment Plant are out of service and treated water demand is 18 million gallons per day or higher;
(4) When there is a supply source contamination that causes either of the reservoirs that supplies Texarkana to to be unusable and treated water demand is 18 million gallons per day or higher.

Voluntary Goal: Inform the customers of the Texarkana Water Utilities and the general public of the situation and encourage the wise use of water.

Measures:

(1) When the mild water shortage conditions exist, the Texarkana Water Utilities will inform its customers of the drought condition by mail and telephone.
(2) The Texarkana Water Utilities will advise its customers of the condition(s) that are causing the water shortage. Each customer will follow its individual emergency measures.

Termination: Stage 1 shall be rescinded either by rising lake levels and

reduced water demand, repair of the transmission mains or pumps, or the contaminant level in the reservoir has been reduced to acceptable levels.

Water Management Strategies: During Stage 1 the Utility will ask citizens to curtail the outdoor use of water for non-essential water uses such as car washing and irrigation through media sources such as the newspaper, television and radio. The Utility will contact its wholesale customers by certified letter and request that the wholesale customer notify its customers of the mild water shortage and implement their drought contingency plans. The Utility will reserve the right to curtail water deliveries to wholesale water customers by a pro-rata method as provided in Texas Water Code, §11.039.

Stage 2 - Moderate Water Shortage

Initiation: The Texarkana Water Utilities will consider that a mild water shortage exists when any two (2) of the following conditions occurs:

(1) When the level of Wright Patman Reservoir is 220.60 and falling;
(2) When the raw water supply from Wright Patman Reservoir is unavailable due to low service pump failure or the raw water transmission main is out of service due to a break or the Millwood transmission main is out of service due to a break and treated water demand is 18 million gallons per day or higher;
(3) When the high service pumps at the Wright Patman Water Treatment Plant or the Millwood Water Treatment Plant are out of service and treated water demand is 18 million gallons per day or higher;
(4) When there is a supply source contamination that causes either of the reservoirs that supplies Texarkana to to be unusable and treated water demand is 18 million gallons per day or higher.

Target Goal: When a moderate water shortage exists, the Texarkana Water Utilities will implement water management staregies in a attempt to achieve a thirty percent (30%) mandatory reduction in non-essential water use.

Termination: Stage 2 shall be rescinded by either rising lake levels and reduced water demand, repair of the transmission mains or pumps, or the contaminant level in the reservoir has been reduced to acceptable levels. Upon termination of Stage 2, Stage 1 becomes operative.

Water Mangement Strategies: During Stage 2 the Utility may request its

wholesale and retail customers to implement mandatory lawn irrigation restrictions. The public will be notified through media sources such as the newspaper, television and radio. The Utility will contact its wholesale customers by certified letter and request that the wholesale customer notify its customers of the moderate water shortage and implement their drought contingency plans. The Utility may request its wholesale customers to prohibit such other non-essential outdoor uses such as car washing, filling of swimming pools, etc. The Utility will reserve the right to curtail water deliveries to wholesale water customers by a pro-rata method as provided in Texas Water Code, §11.039.

Stage 3 - Severe Water Shortage

Initiation: The Texarkana Water Utilities will consider that a severe water shortage exists when any three (3) of the following conditions occurs:

(1) When the level of Wright Patman Reservoir is 220.60 and falling;
(2) When the raw water supply from Wright Patman Reservoir is unavailable due to low service pump failure or the raw water transmission main is out of service due to a break or the Millwood transmission main is out of service due to a break and treated water demand is 18 million gallons per day or higher;
(3) When the high service pumps at the Wright Patman Water Treatment Plant or the Millwood Water Treatment Plant are out of service and treated water demand is 18 million gallons per day or higher;
(4) When there is a supply source contamination that causes either of the reservoirs that supplies Texarkana to to be unusable and treated water demand is 18 million gallons per day or higher.

Target Goal: When a severe water shortage exists, the Texarkana Water Utilities will implement water management strategies in an attempt to acheive a forty percent (40%) mandatory reduction in non-essential outdoor water use and a thirty percent (30%) reduction in total water use.

Termination: Stage 3 shall be rescinded either by rising lake levels and reduced water demand, repair of the transmission mains or pumps, or the contaminant level in the reservoir has been reduced to acceptable levels. Upon termination of Stage 3, Stage 2 becomes operative.

Water Management Strategies: During Stage 3 the Utility will enforce a policy whereby the use of any water for any outdoor activity is banned. The public will be notified through media sources such as the newspaper,

television and radio. The Utility will contact its wholesale customers by certified letter and request that the wholesale customer notify its customers of the severe water shortage and implement their drought contingency plans. The Utility will reserve the right to curtail water deliveries to wholesale water customers by a pro-rata method as provided in Texas Water Code §11.039. The Utility will notify the Executive Director of TCEQ within five (5) business days of implementing any mandatory provisions of the drought contingency plan. If the restrictions of this stage of the plan cause undue hardship on a customer, the customer may request a variance from the City of Texarkana, Texas City Council. These requests will be considered on a case-by-case basis.

Stage 4 - Emergency Water Shortage

Initiation: The Texarkana Water Utilities will consider that an emergency water shortage exists when the Utility is unable to produce or provide treated water from both water treatment plants, Wright Patman and Millwood, at the same time.

Target Goal: When an emergency water shortage exists, the Texarkana Water Utilities will implement water management strategies in an attempt to reduce daily water use to 8.65 million gallons per day (MGD).

Termination: Stage 4 shall be rescinded when either of the water treatment plants, Wright Patman or Millwood, are capable of pumping potable water into the distribution system.

Water Management Strategies: During Stage 4 the Utility request that customers only use water for sanitary puposes. The public will be notified through media sources such as television and radio. The Utility will contact its wholesale customers by telephone and request that the wholesale customer notify its customers of the emergency water shortage and implement their drought contingency plans. The Utility will reserve the right to curtail water deliveries to wholesale customers by a pro-rata method as provided in Texas Water Code, §11.039. The Utility will notify the Executive Director of TCEQ within five (5) business days of implementing any mandatory provisions of the drought contingency plan. If the restrictions of this stage of the plan cause undue hardship on a customer, that customer may request a variance from the City of Texarkana, Texas City Council. These requests will be considered on a case-by-case basis.

G. **Plan to include procedures to be followed for the initiation or**

termination of each drought response stage, including procedures for notification of the public: As the conditions that initiated the need to implement the Drought Contingency Plan are abated, either by rising lake levels and reduced water demand or repair of the transmission mains and/or pumps, the Utility will terminate the stages of the water demand management plan in reverse order of their implementation. All parties that were notified by the initiation of the plan will also be notified of the termination of the plan.

H. **Procedures for granting variances to the plan:** Citizens or businesses seeking variances to any stage of the plan will be required to submit them to the City of Texarkana, Texas City Council. The City Council will conduct public hearings as to why the variance should be granted and will vote upon the granting of the variance.

I. **Procedures for the enforcement of any mandatory water use restrictions, including specification of penalties for violations of such restrictions:**
The Utility staff will work closely with the Texarkana, Texas City Council, the Texarkana, Texas City Attorney's office and the Texarkana, Texas Police Department to develop procedures for the enforcement of mandatory water use restrictions. The Utility will ask the City Attorney's office to prepare the proper Ordinances to provide for penalties for violations of water use restrictions, the Utility will present the Ordinances to the City Council for public discussion and approval and the Police Department will ticket citizens who are illegally using water.

2. Review and update plan as appropriate, at least every five (5) years The plan will be reviewed and updated on or before December 31, 2022.



WATER CONSERVATION PLAN

RIVERBEND WATER RESOURCES DISTRICT UTILITY DISTRICT

NEW BOSTON. TX

228A Texas Avenue
New Boston, Texas 75570

April 2018

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FOREWORD

Declaration of Policy, Purpose, and Intent

In order to conserve the available water supply and protect the integrity of water supply facilities, with particular regard for domestic water use, sanitation, 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 Riverbend Water Resources District ("Riverbend") hereby adopts the following regulations and restrictions on the delivery and consumption of water through a resolution. Water uses regulated or prohibited under this Water Conservation Plan (the Plan) are essential.

Solicitation of Public Input

Riverbend will periodically schedule public meetings to solicit input about the Plan. Information on the time and place of the meeting will be disseminated by means of utility bill inserts, by posting notice of the meeting at the Riverbend's office, publishing in the local newspaper, and/or posting on www.rwrd.org.

Public Education

Riverbend will periodically provide the public with information about the Plan, including information about the conditions under which each stage of the Plan is to be initiated or terminated and the drought response measures to be implemented in each stage. This information will be provided by means of public events and utility bill inserts.

Application

The provisions of this Plan shall apply to all persons, customers, and property using water provided by Riverbend. The terms "person" and "customer" as used in the Plan include individuals, corporations, partnerships, associations, and all other legal entities.

A. CURRENT AND NEAR-TERM WATER CONSERVATION PLAN

1. Background

The Red River Army Depot ("RRAD") is located in Bowie County, Texas approximately 17 miles west of Texarkana and comprises 19,000 acres, of which 9,000 acres are used for ammunition storage with the bulk of the land devoted to recreation, training and forest. The RRAD site has 720 buildings and 702 ammunition storage igloos, which enclose over 8 million square feet of space. The major industrial operations of RRAD include maintenance, repair, and overhaul of major weapon systems and components.

The Riverbend Water Resources District ("Riverbend") is a special district created under Chapter 9601 of the Special District Local Laws Code of the State of Texas, which currently serves RRAD and approximately 75 retail and commercial customers. The District is comprised of 16 Member Entities, including the cities of Annona, Atlanta, Avery, DeKalb, Hooks, Leary, Maud, Nash, New Boston, Redwater, Texarkana, Texas, Wake Village, TexAmericas Center, as well as the counties of Bowie, Cass, and Red River. These Member Entities pay a fee to the District to provide governance structure for water resources that represent the region through oversight of regional water contracts, to supervise regional water infrastructure issues facing the area, and to protect the ownership and distribution of water resources in the region by serving a primary role in the negotiations for water supply storage and sales in Lake Wright Patman. This document serves as the Water Conservation Plan for the District.

Riverbend wet utilities consist of an Industrial Wastewater Treatment Plant (IWWTP), a Sanitary Wastewater Treatment Plant, and a Water Distribution System (WDS) in which we purchase water from Texarkana Water Utilities. The water distribution system and sanitary treatment plant were constructed in the early 1940's and the IWWTP was constructed in 1980.

2. Utility Profile

Prior to the transfer of assets to Riverbend, the WDS, IWWTP and Sanitary Wastewater Treatment Plant were owned and operated by TexAmericas Center. Since approximately 95 percent of the current water usage is used by RRAD, many of the questions in the Utility Profile are not applicable.

3. Conservation Goals – Current and Five-Year Plan

Riverbend has and will continue to conserve water via programs outlined in this Plan. The five year conservation goal of Riverbend provides for the following measures:

a) Set a goal of 150 gpcd for residential customers by means of education and installation of water saving devices;

b) Strive to achieve a 50 gpcd of indoor use for residential customers in both single and multi-family units by means of education and installation of water saving devices;

c) Work with RRAD personnel to install water meters on selected water service lines;

d) Achieve and maintain water loss of under 15% of production;

e) Promote awareness of water conservation initiatives (citizen/corporate education);

f) Educate users in flow reduction and minimization techniques;

g) Monitor water conservation progress toward established goals;

h) Readjust water conservation goals as needed;

i) Improve record keeping procedures to better track water production numbers, residential water use, commercial water use, and water use by RRAD to help reduce the volume of unaccounted for water; and

j) Upgrade and repair existing distribution system to help reduce water loss through leaks.

4. Conservation Goals – Ten-Year Plan

In conjunction with implementation of the Five-Year Plan, Riverbend also instates a ten-year plan that will establish the following system goals:

a) Achieve and maintain water loss of under 10% of production by means of upgrading and replacing water system piping and components;

b) Work with RRAD personnel to test/replace water meters on selected water service lines;

c) Coordinate with RRAD to reduce RRAD industrial water use by 5% by means of upgrading equipment and processes to more modern systems;

d) Continue to promote awareness of water conservation initiatives (citizen/corporate education); and

e) Continue to educate users in flow reduction and minimization techniques.

B. LONG-TERM WATER CONSERVATION PLAN

This Water Conservation Plan includes provisions for reducing unaccounted for water, testing, and repair of meters and the distribution system, as well as determining rate structures, and educating users about water conservation.

1. Unaccounted-For Water

Riverbend practices the following measures to determine and control unaccounted for uses of water:

a) Riverbend water treatment plant operation's staff follow standard operating procedures which include observations of daily water usage to identify any abnormalities that may indicate the existence of water system leaks;

b) Riverbend personnel and meter readers make visual observations on a regular basis throughout the Riverbend's service area to check for system leaks;

c) Riverbend accounting staff review printouts of meter readings for abnormalities that may indicate possible leaks or malfunctions; and

d) Leaks are identified and repaired promptly.

2. Meter Testing & Repair

Metering all water services is an effective means of improving and maintaining control of water system operations and provides the basis for efficient and equitable cost recovery. Metering provides a database for system performance monitoring, for planning future facilities, and for assessing the effects of water conservation measures. Metering also improves accountability for both water deliveries and for unaccounted water losses. The District meters all water accounts with the exception of water used by the RRAD facilities. All water meters used meet AWWA standards for accuracy (plus or minus 5.0%)

Riverbend meters the quantity of water that is delivered to each residential and commercial customer (RRAD facilities excluded). Meters are read and the quantities are recorded once per month, with billings made monthly to residential and commercial customers.

Periodic testing, repair, and/or change-out of meters are essential to an effective metering program. Meters are tested on a regular basis and meters found to be performing outside accepted parameters for accuracy (plus or minus 5.0%) will be repaired or replaced as required.

Riverbend will institute procedures to improve accounting for unmetered water losses resulting from RRAD usage, flushing of water mains, fire fighting, and main breaks. These procedures should help Riverbend to better estimate actual water losses due to leakage.

Riverbend will endeavor to work jointly with RRAD to monitor and reduce water consumption at some of the major Army facilities on the Base. This may include the voluntary installation of meters by the RRAD and evaluation/upgrade of plumbing to high efficiency models.

3. Distribution System Maintenance

The next sections detail the measures that Riverbend has implemented or will implement to help determine and control unaccounted-for water:

3.1 Leak Detection

The water distribution system is under continuous visual inspection for leaks by Riverbend personnel as well as by users. Reported leaks are addressed immediately. A Leak Detection Audit is also performed every 3 years system wide by an outside contractor.

3.2 Repairs

Riverbend requires all new water facilities to be built to strict specifications which are inspected by Riverbend personnel during construction to ensure quality workmanship and materials before the system is accepted for permanent maintenance by Riverbend.

3.3 Pressure

Riverbend will monitor and control pressures in the distribution system such that excessive pressure does not cause pipeline breaks and water loss. Pressure monitoring will become part of the routine distribution system maintenance program.

4. Water Rate Structure

The following tables (2-1 through 2-3) outline the water rate structure for Riverbend's residential and commercial users (Effective 01 Jan 2003). RRAD currently accounts for greater than 95% percent usage on water and sewer. Fees for the RRAD are negotiated independently from public user fees.

Table 4-1 Wet Utility Rates

RIVERBEND WATER RESOURCES DISTRICT															
WATER/SEWER RATE SCHEDULE															
APPROVED RATES - EFFECTIVE MAY 1, 2017															
					Commercial Sewer Only		Commercial Water/Sewer		Private Water/Sewer		Private 1" Sprinkler		Commercial Hydrant/Sprinkler	
Standard Water Rate ($/1000)							$6.50		$3.50		$3.50			
Standard Sewer Rate ($/1000)							$7.00		$7.00					
Facility Charge														
		Water					$3.25		$2.75		$2.50			
		Wastewater					$3.25		$2.75					
Total Charge							$20.00		$16.00		$6.00			
							($/1000)		($/1000)		($/1000)			
Fixed Minimum Charge					$20.00		$35.00		$20.00		$10.00		$15.00	
		Water Rate					$10.00		$7.00		$7.00		$10.00	
		Sewer Rate			$15.00		$15.00		$10.00					
	Facility Charge Water						$5.00		$1.50		$3.00		$5.00	
Facility Charge Wastewater					$5.00		$5.00		$1.50					
Backflow Device Annual Calibration*					$50.00									
**The TCEQ requires an annual back flow calibration. You may have it down on your own or Riverbend can assist you. Riverbend's fee for this service is $50. If you choose to have the calibration done on your own, Riverbend is required to have a certificate on file. If Riverbend does not receive that certificate on file at least 20 days before your annual calibration is due, Riverbend will complete the calibration for you and the fee will be added to your following months' water and sewer invoice.*														
5/1/2017														

Table 4-2 Connection Fees

Fees	Water Use Categories	
	Private	Commercial
New Connection Fee	$50.00	$50.00
Reconnection Fee	$50.00	$50.00

Table 4-3 Tap Fees

Estimated Fees	Cost
Water Tap	
1-1/2"	$95 7.0 5
2"	$2, 186 .30
4"	$7, 287 .57
6"	$11 ,30 1.0 2
Sewer Tap	
4"	$29 3.6 9
6"	$32 6.9 3

5. Public Education

Riverbend will consider the following measures to educate the public regarding the benefits of water conservation.

5.1 Residential Users

Provide informational literature to existing residential customers along with billing statements to encourage reduction in water use. Literature will explain treatment costs and environmental impacts of excessive water use as well as simple ways to decrease day-to-day usage such as upgrades to high efficiency plumbing models.

5.2 Industrial/Commercial Users

Provide information literature to existing commercial customers to encourage reduction in overall water use, through conservation measures such as process water reuse, minimization, and plumbing upgrades.

5.3 Government Users

Use by RRAD accounts for a large percentage of the water produced by Riverbend. Riverbend will work closely with the RRAD to encourage the reduction of water use for non-essential military operations and improve water accounting of major water use facilities on the Army base.

5.4 Additional Education

As new programs or literature become available to Riverbend regarding water conservation and water treatment, Riverbend will, in turn, pass this information along to the water users to encourage their reduction of water consumption. Riverbend will also pass along information to its users regarding changes/upgrades to the water treatment/distribution system.

5.5 New Users

When new users begin using the Riverbend's water services, they will be provided with the appropriate informational literature detailing the Riverbend's policies/suggestions for water conservation upon request.



DROUGHT CONTINGENCY PLAN

RIVERBEND WATER RESOURCES DISTRICT

NEW BOSTON. TX

228A Texas Avenue
New Boston, Texas 75570

CCN# 13201
PWS# 0190021

April 25, 2018

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, Riverbend Water Resources District adopts the following Drought Contingency Plan (the Plan).

Section II: Public Involvement

Opportunity for the public and wholesale water customers to provide input into the preparation of the Plan was provided by Riverbend Water Resources District by means of direct communication with member cities and the public.

Section III: Wholesale Water Customer Education

Riverbend Water Resources District will periodically provide wholesale 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 will be provided by means of providing a copy of the Plan to each customer either through monthly invoice and/or an e-mail to the customer.

Section IV: Coordination with Regional Water Planning Groups

The water service area of Riverbend Water Resources District is located within the TexAmericas Center footprint as well as Bowie, Red River, and Cass counties and Riverbend Water Resources District will be more than glad to provide a copy of the Plan to any customers or civilians who are interested within these counties.

Section V: Authorization

The Executive Director or his/her designee, is hereby authorized and directed to implement the applicable provisions of this Plan upon determination that such implementation is necessary to protect public health, safety, and welfare. The Executive Director, or his/her designee, shall have the authority to initiate or terminate drought or other water supply emergency response measures as described in this Plan.

Section VI: Application

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

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

The Executive Director, or his/her designee, shall monitor water supply and/or demand conditions on a (e.g., weekly, 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 will be made by mail or telephone. The news media will also be informed.

The triggering criteria described below are based on pumping capacities and volume of surface supply.

Stage 1 Triggers -- MILD Water Shortage Conditions

Requirements for initiation – Riverbend Water Resources District will recognize that a mild water shortage condition exists when for a period of **72** consecutive hours **85%** of pumping capacity is utilized or when the volume of surface supply is less than **50%** of capacity.

Requirements for termination - Stage 1 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of **10** consecutive days. Riverbend Water Resources District will notify its wholesale customers and the media of the termination of Stage 1.

Stage 2 Triggers -- MODERATE Water Shortage Conditions

Requirements for initiation –Riverbend Water Resources District will recognize that a moderate water shortage condition exists when for a period of **72** consecutive hours **90%** of pumping capacity is utilized or when the volume of surface supply is less than **40%** of capacity.

Requirements for termination - Stage 2 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of **10** consecutive days. Upon termination of Stage 2, Stage 1 becomes operative. Riverbend Water Resources District will notify its wholesale customers and the media of the termination of Stage 2.

Stage 3 Triggers -- SEVERE Water Shortage Conditions

Requirements for initiation – Riverbend Water Resources District will recognize that a severe water shortage condition exists when for a period of **72** consecutive hours **95%** of pumping capacity is utilized or when the volume of surface supply is less than **25%** of capacity.

Requirements for termination - Stage 3 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of **10** consecutive days. Upon termination of Stage 3, Stage 2 becomes operative. Riverbend Water Resources District will notify its wholesale customers and the media of the termination of Stage 3.

Stage 4 Triggers -- CRITICAL Water Shortage Conditions

Requirements for initiation - Riverbend Water Resources District will recognize that an emergency water shortage condition exists when major water line breaks, or pump or system failures occur, which cause unprecedented loss of capability to provide water service; or natural or man-made contamination of the water supply source(s).

Requirements for termination - Stage 4 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of **10** consecutive days. Riverbend Water Resources District will notify its wholesale customers and the media of the termination of Stage 4.

Section VIII: Drought Response Stages

The Executive Director, or his/her designee, shall monitor water supply and/or demand conditions and, in accordance with the triggering criteria set forth in Section VII, shall determine that mild, moderate, or severe water shortage conditions exist or that an emergency condition exists and shall implement the following actions:

Stage 1 Response -- MILD Water Shortage Conditions

Target: Achieve a voluntary 10 percent reduction in daily demand.

Best Management Practices for Supply Management:

Communication with customers to reduce daily demand.

Water Use Restrictions for Reducing Demand:

(a) The Executive Director, or his/her designee(s), will contact wholesale water customers to discuss water supply and/or demand conditions and will request that wholesale water customers initiate voluntary measures to reduce water use (e.g., implement Stage 1 or appropriate stage of the customer's drought contingency plan).

(b) The Executive Director, or his/her designee(s), will provide a weekly report to news media with information regarding current water supply and/or demand conditions, projected water supply and demand conditions if drought conditions persist, and consumer information on water conservation measures and practices.

Stage 2 Response -- MODERATE Water Shortage Conditions

Target: Achieve a 15 percent reduction in daily demand.

Best Management Practices for Supply Management:

Communicate with customers to reduce daily demand and utilize news media to inform and convince public to reduce demand. Pro-rata curtailment will be utilized.

Water Use Restrictions for Reducing Demand:

(a) The Executive Director, or his/her designee(s), will request wholesale water customers to initiate mandatory measures to reduce non-essential water use (e.g., implement Stage 2 or appropriate stage of the customer's drought contingency plan).

(b) The Executive Director, or his/her designee(s), will initiate weekly contact with wholesale water customers to discuss water supply and/or demand conditions and the possibility of pro rata curtailment of water diversions and/or deliveries.

(c) The Executive Director, or his/her designee(s), will further prepare for the implementation of pro rata curtailment of water diversions and/or deliveries by preparing a monthly water usage allocation baseline for each wholesale customer.

(d) The Executive Director, or his/her designee(s), will provide a weekly report to news media with information regarding current water supply and/or demand conditions, projected water supply and demand conditions if drought conditions persist, and consumer information on water conservation measures and practices.

Stage 3 Response -- SEVERE Water Shortage Conditions

Target: Achieve a 20 percent reduction in daily demand

Best Management Practices for Supply Management:

Communicate with customers to reduce daily demand and utilize news media to inform and convince public to reduce demand. Pro-rata curtailment will be utilized.

Water Use Restrictions for Reducing Demand:

(a) The Executive Director, or his/her designee(s), will contact wholesale water customers to discuss water supply and/or demand conditions and will request that wholesale water customers initiate additional mandatory measures to reduce non-essential water use (e.g., implement Stage 3 or appropriate stage of the customer's drought contingency plan).

(b) The Executive Director, or his/her designee(s), will initiate pro rata curtailment of water diversions and/or deliveries for each wholesale customer.

(c) The Executive Director, or his/her designee(s), will provide a weekly report to news media with information regarding current water supply and/or demand conditions, projected water supply and demand conditions if drought conditions persist, and consumer information on water conservation measures and practices.

Stage 4 Response -- EMERGENCY Water Shortage Conditions

Whenever emergency water shortage conditions exist as defined in Section VII of the Plan, the Executive Director shall:

1. Assess the severity of the problem and identify the actions needed and time required to solve the problem.

2. Inform the utility director or other responsible official of each wholesale water customer by telephone or in person and suggest actions, as appropriate, to alleviate problems (e.g., notification of the public to reduce water use until service is restored).

3. If appropriate, notify city, county, and/or state emergency response officials for assistance.

4. Undertake necessary actions, including repairs and/or clean-up as needed.

5. Prepare a post-event assessment report on the incident and critique of emergency response procedures and actions.

Section IX: Pro Rata Water Allocation

In the event that the triggering criteria specified in Section VII of the Plan for Stage 3 – Severe Water Shortage Conditions have been met, the Executive Director is hereby authorized initiate allocation of water supplies on a pro rata basis in accordance with Texas Water Code, §11.039.

Section X: Contract Provisions

Riverbend Water Resources District will 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.

Section XI: Enforcement

Surcharge:

During any period when either mandatory water use restrictions or pro rata allocation of available water supplies are in effect, wholesale customers shall pay the following surcharges on excess water diversions and/or deliveries:

__1.5__ times the normal water charge per 1000 gallons for water diversions and/or deliveries in excess of the monthly allocation from _5_ percent through _15_ percent above the monthly allocation.

__2__ times the normal water charge per 1000 gallons for water diversions and/or more than 15 percent above the monthly allocation, to the extent legally permitted.

Fines and/or discontinuation of service:

Mandatory water use restrictions or pro rata allocation of available water supplies may be imposed during drought stages and emergency water management actions. These water use restrictions will be enforced by warnings and penalties as follows:

- On the first violation, customers will be notified by written notice that they have violated the mandatory water use restriction.
- If the first violation has not been corrected after ten (10) days from the written notice, Riverbend Water Resources District may assess a fine up to $_100_ per violation.
- Riverbend Water Resources District may install a flow restricting device in the line to limit the amount of water which will pass through the meter in a 24-hour period. The utility may charge the customer for the actual cost of installing and removing the flow restricting device, not to exceed fifty dollars ($50.00);
- Riverbend Water Resources District maintains the right, at any violation or action level, to disconnect irrigation systems and/or suspend water services to a customer for public safety issues with reconnection fees and possible citations.
- Subsequent violations of the plan shall result in increased fines or upon the occurrence of __3__ violations, after notice, the discontinuation of services. Services discontinued under this provision shall be restored only upon payment of a reconnection fee and any other costs incurred by the utility in discontinuing service.

Section XII: Variances

The Executive Director, or his/her designee, may, 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 will 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 Executive Director within 5 days after pro rata allocation has been invoked. All petitions for variances shall be reviewed by the Riverbend Water Resources District Board of Directors, 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 will 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 Riverbend Water Resources District Board of Directors shall be subject to the following conditions, unless waived or modified by the Riverbend Water Resources District Board of Directors or its designee:

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

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

Section XIII: Severability

It is hereby declared to be the intention of the Riverbend Water Resources District Board of Directors) 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 Riverbend Water Resources District Board of Directors without the incorporation into this Plan of any such unconstitutional phrase, clause, sentence, paragraph, or section.

APPENDIX K

Report References

SUSAN ROTH
water and wastewater consulting

REFERENCES

AGFC (Arkansas Game & Fish Commission), May 2013, Arkansas Aquatic Nuisance Species Management Plan, Arkansas.

APAI (Alan Plummer Associates, Inc.), December 2011, Texarkana Water Utilities Water Distribution Master Plan, Fort Worth, Texas.

AWWA (American Water Works Association), 1999, *Water Quality and Treatment: A Handbook of Community Water Systems.* 5th ed. Mcgraw-Hill. pp. 12.26.

Brandes, Robert J., June 1999, Water Availability Modeling for the Sulphur River Basin, prepared for the Texas Natural Resource Conservation Commission, Austin, Texas.

Bucher, Willis & Ratliff, Inc., 2011, City of Texarkana, Texas Comprehensive Plan Report, Texarkana, Texas.

CDM Smith, January 2014, Water Availability Report, submitted to the Arkansas Natural Resources Commission, Little Rock, Arkansas.

CH2M Hill, December 2009, Evaluation of Treatment Alternatives, submitted to Riverbend Water Resources District, Texarkana, Texas.

CH2M Hill and MTG Engineers and Surveyors, August 2012, Phase 3 Report on Water Treatment Plant and Raw Water Intake Site Selection, submitted to Riverbend Water Resources District, Texarkana, Texas.

City of Texarkana, Texas and City of Texarkana, Arkansas, May 1953, Contract No. DA-16-047-eng-2033 with the United States of America.

City of Texarkana, Texas, April 1968, Contract No. DACW29-68-A-0103 with the United States of America, for Municipal and Industrial Water Supply Storage Space in Texarkana Reservoir.

City of Texarkana, Texas, September 1968, Contract No. DACW29-69-C-0019 with the United States of America.

Holliday, Lemons, & Cox, P.C., 2016, *Texarkana Financial Audit (thru 9-30-16),* prepared for the City of Texarkana, Texas, Texarkana, Texas.

HDR Engineering, Inc., November 2008, Membrane Filtration Pilot Study Report, prepared for Texarkana Water Utilities, Texarkana, Texas.

HDR Engineering, Inc. and Freese and Nichols, Inc.., May 2013, Unified Costing Model User's Guide v 1.0, prepared for Texas Water Development Board, Austin, Texas.

IWR (Institute for Water Resources), May 2016, Status and Challenges for USACE Reservoirs, a product of the National Portfolio Assessment for Water Supply Reallocations, 2016-RES-01, Alexandria, Virgina.

Kawamura, Susumu, 1991, Integrated Design of Water Treatment Facilities. John Wiley and Sons, Inc. 1st edition.

Nix, Daniel and John Scott Taylor, P.E., 2003, Filter Media Evaluation Procedures for Granular Media. American Water Works Association. 1st edition. Denver, Colorado.

RPS, Inc., et. al., December 2015, 2016 North East Texas Regional Water Plan, prepared for The North East Texas Regional Water Planning Group, Texas Water Development Board, Austin, Texas.

RWRD (Riverbend Water Resources District), January 2018, *First Supplement and Amendment to the Agreement for Purchase and Sale of Assets and Assignment and Assumption of Contract Rights* with TexAmericas Center.

Special Districts Local Laws Code. 2018, http://www.statutes.legis.state.tx.us/Docs/SD/htm/SD.9601.htm.

SWAWD (Southwest Arkansas Water District), 2018, phone call to Steve Nipper, General Manager.

Texas Administrative Code, http://texreg.sos.state.tx.us/public/readtac$ext.viewtac

Texas A&M Real Estate Center, January 2018, *Rural Land Prices for North East (LMA 29)*, https://www.recenter.tamu.edu/data/rural-land/#!/lma/North_East_(LMA_29).

TPWD (Texas Parks and Wildlife Department), July 2017, 2016 Fisheries Management Survey Report, Lake Wright Patman, Austin, Texas.

TWDB (Texas Water Development Board), March 2003, Volumetric Survey of Wright Patman Lake, prepared for the U.S. Army Corps of Engineers, Fort Worth District, in cooperation with the City of Texarkana, Texarkana, Texas.

TWDB (Texas Water Development Board), August 2012, Volumetric and Sedimentation Survey of Wright Patman Lake, March - June 2010 Survey, prepared for the U.S. Army Corps of Engineers, Fort Worth District, Texarkana, Texas.

TWU (Texarkana Water Utilities), 2017, Utility Information sheet, Texarkana, Texas.

TWU (Texarkana Water Utilities), 2017, Operating Reports for New Boston Road, Millwood, and IP plants, Texarkana, Texas.

USACE (U.S. Army Corps of Engineers, Little Rock District), 2017, *Millwood Lake Natural Resources*, http://www.swl.usace.army.mil/Missions/Recreation/Lakes/Millwood-Lake/Natural-Resources/.

USACE (U.S. Army Corps of Engineers, Fort Worth District), 2017, *Wright Patman Lake Homepage*, http://www.swf-wc.usace.army.mil/wrightpatman/.